EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING PREVENTION OF STROKE AMONG HYPERTENSIVE PATIENTS IN A SELECTED HOSIPITALS AT MADURAI DISTRICT

REG. NO: 301411852

A DISSERTATION SUBMITTED TO THETAMILNADUDR.M.G.RMEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL 2016

EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING PREVENTION OF STROKE AMONG HYPERTENSIVE PATIENTS IN A SELECTED HOSIPITALS AT MADURAI DISTRICT

REG. NO: 301411852

Signature of the
Internal examiner

Signature of the
External examiner

CERTIFICATE

This is to certify that the dissertation entitled **"EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING PREVENTION OF STROKE AMONG HYPERTENSIVE PATIENTS IN A SELECTED HOSIPITAL AT MADURAI"** is submitted to the faculty of nursing, **The Tamil DR. M.G.R MEDICAL UNIVERSITY , Chennai by Mrs.Jayalakshmi.H** in partial fulfillment of the requirement for the degree of Master of Science in nursing. It is the bona fide work done by her and the conclusions or her own. It is further certified that this dissertation or any past thereof has not formed the basis for award of any degree, diploma or any title.

Dr. Prof S. Rajina rani M. Sc (N), Ph. D.,

Principal,

RASS Academy College of Nursing

Poovanthi, Sivagangai Dist-630611,

Tamil Nadu.

EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING PREVENTION OF STROKE AMONG HYPERTENSIVE PATIENTS IN A SELECTED HOSIPITALS AT MADURAI DISTRICT

APPROVED BY THE DISSERTATION COMMITTEE ON APRIL 2015

1. RESEARCH GUIDE : ----------

Dr. Prof S. Rajina rani M. Sc (N), Ph. D.,

Principal,

RASS Academy College of nursing,

Poovanthi, sivagangai dist-630 611

Tamilnadu.

2. SPECIALITY GUIDE : ----------

Prof. Mrs.H.UMMUL HAPIPA, M. Sc (N).,

Vice Principal,

RASS Academy college of Nursing,

Poovanthi, sivagangai dist-630 611

Tamilnadu.

3. MEDICAL EXPERT : ----------

Dr. SANGUMANI, MD.,

Senior consultant,

Nandhini Nursing Home,

Madurai.

A DISSERTATION SUBMITTED TO THETAMILNADUDR.M.G.RMEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL 2016

ACKNOWLEDGEMENT

Foremost thanks to **GOD ALMIGHTY** whose open arms strengthened me to move forward when I was and faint and weary. I thank for his love, grace blessing that enabled me to complete this study successfully.

I would like to extent my sincere thanks to **Mr.C.Ravisankar**, **Chairmen, RASS Academy College of Nursing, Poovanthi** for his support and for providing the required facilities for the successful completion of this study.

I extent my heartfelt and sincere thanks to my research guide **Dr.Prof.S.Rajina Rani**,**M. Sc(N).,PhD., Principal ,RASS Academy College of Nursing, Poovanthi** for a deniable work, interest cheerful approach, always never ending willingness to provide expert guidance and suggestion to mould this study to the present form.

I extent my heartfelt and sincere thanks to **Dr.Prof.G.Thilagavathi,MSc (N).,Ph.D., Former Principal, RASS Academy College of Nursing, Poovanthi** for a deniable work, interest, cheerful approach, always with never ending willingness to provide expert guidance and suggestion to mould this study to the present form

My words are inadequate to thanks my clinical specialties guide **prof.Mrs.H.Ummul Hapipa,Msc(N).,Vice Principal,Rass Academy College of Nursing ,Poovanthi** for motivating meet to go ahead in this project. She has given me advice feedback encouragement. She has shown as different base to approach research problems and the need to be persistent to accomplish any goal.

I extent my heartfelt and sincere thanks to my medical guide. My deep sense of gratitude to **Dr. Sangumani., MD., and Dr. Sujatha Sangumani, DGO., Managing Director, Nandhini Nursing Home Madurai** for his help valuable guidance and encouragement which enabled meets to accomplish this task.

My deep sense of gratitude to **Prof. Mrs.M.Malar Vizhi**, M.Sc(N)., HOD of Child health Nursing, **Reader.Prof.Mrs.M.Visalatchi,** M.Sc(N)., Medical Surgical Nursing, **Asso.Prof.Mrs.K.N.Sudha,** M.Sc(N)., HOD of Obstetrics and Gynecological Nursing, **Asso.Prof.Miss.M.Nancy Flomina,** M.Sc(N).,HOD of

Mental health Nursing, **Asso.Prof.Mrs.M.Kavitha,** M.Sc.(N)., Medical Surgical Nursing, **Lecturer.Miss.V.Kavitha,** M.Sc.(N)., Obstetrics and Gynecological Nursing, **Tutor.Mrs.M.Logeswari., Tutor.Mrs.I.Jenita, Tutor. Mrs.R.Pandi Meenal, Tutor.Miss.R.Shalini** RASS Academy College of Nursing for their cheerful approach, as their hands out stretched always with never ending willingness to provide guidance and suggestions.

My sincere thanks to **Dr.Varatharajan, Msc., M.Phill., M.Ed., Ph.D(Ed).,** Professor of statistic RASS Academy College Nursing, Poovanthi for his help in the statistical analysis of the data which is core of the study.

I would like extend my thanks to **Mr.L.Tharmalingam, Mr.K.Sasi Kumar,** software programmer and my beloved friends **Ms.I. Mesiya Femina, Mrs.R.Devika** who was kind enough to spend time in preparing self instructional module for this study in an effective way.

I extend my special thanks to **Hypertensive patients** who participated in this study, without them this should not have been a success.

I express my sincere thanks to **my beloved mother** for her blessing, support and encouragement in my research.

Finally I dedicate this study to my beloved husband **Mr.S.Karthikeyan** for his encouragement, joy, hope and love instilled in me that made this works a reality.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ABBREVIATIONS USED IN STUDY

WHO	:	World Health Organisation
CVA	:	Cerebrovascular accident
WSO	:	World Stroke Organization
CT	:	Computer tomography
SIM	:	Self Instructional Module
SBP	:	Systolic Blood Pressure
DBP	:	Diastolic Blood Pressure
SAGE	:	Study of Global Aging and adults' health
ICH	:	Intra cerebral Hemorrhage
MAP	:	Mean Arterial Pressure
PARs	:	Population-attributable risks
SAH	:	Sub arachnoid Hemorrhage
TIA	:	Transient ischemic attack
SPARCL	:	Stroke Prevention by Aggressive Reduction in Cholesterol.
ISH	:	Isolated Systolic Hypertension
ACE	:	Angiotensin-converting-enzyme inhibitor
BMI	:	body mass index

ABSTRACT

The study on **"EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING PREVENTION OF STROKE AMONG HYPERTENSIVE PATIENTS IN A SELECTED HOSIPITALS AT MADURAI''** was undertaken by **REG. NO: 301411852** during the year 2015-2016 in partial fulfillment of the requirement for the degree of master of science in Nursing at RASS Academy College of Nursing, Poovanthi which affiliated to The Tamilnadu Dr.M.G.R. Medical University, Chennai.

Objectives: To assess the level of knowledge regarding prevention of stroke among hypertensive patients in a selected hospital. To evaluate the effectiveness of self instructional module knowledge regarding prevention of stroke among hypertensive patients in a selected hospital. To find out the association between the pre-test level of knowledge with their selected demographic variables. **Conceptual frame work**: The study was based on General System Theory by Ludwig Von Bertalanffy (1968).**Approach:** Evaluatory approach was adopted for this study. **Design:** pre-experimental one group pre-test post-test design was adopted for this study. **Settings:** The study was conducted at Nandhini Nursing Home at Madurai. **Sample Size:** The Sample size was 60 hypertensive patients. **Sampling Technique:** The Non probability purposive sampling technique was used to select the samples. **Methods of data collection procedure:** Data was collected from the hypertensive patients to assess the level knowledge by using semi-structured knowledge questionnaire before implementation of self instructional module. Post test was conducted 1 week after administration of self instructional module, the level of knowledge was assessed. The collected were tabulated and analyzed by descriptive and inferential statistic. **Results:** The result showed that, there was a significant difference between pre-test and post-test level knowledge regarding prevention of stroke among hypertensive patients. The obtain t-value (33.67) was greater than the table value at 0.05 level of significant. **CONCLUSION:** This study concludes that Self Instructional module was effective in improving the level of knowledge regarding prevention of stroke among hypertensive patients.

CHAPTER- I

INTRODUCTION

"To keep the body in good health is a duty, otherwise we shall not be able to keep our mind strong and clear"-Buddha

Kapil Saini (2011) stated that health is real wealth. A healthy person is an asset to himself, to his family and his community. On the other hand an ailing person is a burden on all. He is a pivot upon which a man's whole personality and its wellbeing depend. Health can be achieved only by understanding what health is, on what it depends and then applying this knowledge in everyday life. The care of the body regarding food, cleanliness, exercise, rest and protection against disease are essential for the preservation of good health. Life is for living. Without health, life is deprived of not only much of its usefulness, but also its joys and pleasure.

Gray William K (2012) says that the obvious benefit of having a healthy lifestyle is that you will be healthy. Most of the major illnesses, particularly the once that shorten your life, are the result of not living a healthy lifestyle. You should find that your health is much improved and this will ultimately allow you live for a much longer time. Admittedly not at all illness can be avoided with a healthy lifestyle but you will have a much better chance of staying healthy if you live that kind lifestyle.

Levy PD (2013) says that one of the important life style related disease is hypertension. Hypertension is one of the most common. Worldwide diseases afflicting Due to the associated mortality and cost to society, preventing and treating hypertension is an important public health challenge. Fortunately, recent advances and trials in hypertension research are leading to an increased understanding of the pathophysiology of hypertension and the promise for novel pharmacologic and interventional treatment for this widespread disease.

Schoenstadt (2013) says that high blood is often referred to as "The silent killer". Most people with high blood pressure don't have any high blood pressure symptoms, since the effect are occurring inside the body. The body structures that chronic high blood pressure affects most includes: Blood vessels, Heart, Brain, Kidneys, Eyes, Because of the effects on these organs, a person who has had high

blood pressure for a long time (known as chronic hypertension) can have attack kidney failure, congestive heart failure (CHF), eye damage with loss of vision, peripheral arterial disease including bulges or outpouchings of the aorta (called aneurysms), stroke. In fact, when compared to people without high blood pressure, people with untreated high blood pressure 7 times more likely to have a stroke.

Anand moses (2007) says that, Causes of hypertension are Smoking, Obesity or being overweight, Diabetes, Sedentary lifestyle, Lack of physical activity, High levels of salt intake, insufficient calcium, potassium, and magnesium consumption, Vitamin D deficiency, High levels of alcohol consumption, Stress, Aging, Medicines such as birth control pills, Genetics and family History of hypertension, chronic kidney disease, Adrenal and thyroid problems or tumors

Rosei BA (2005) says that Stroke or cerebrovascular accident (CVA) is a disease which affects the brain function. The brain is vital to our existence. In controls our voluntary movements and it regulates involuntary activities such as breathing and heartbeat. The brain serves as the seat of human consciousness. It stores our memories, enables us to feel emotions, and gives us our personalities. In short, the brain dictates the behaviors that allow us to survive and makes us who we are.

Prathap (2011) stated that stroke occurs when an artery becomes blocked by blood clots or by the gradual build-up plaque and other fatty deposits (ischemic stroke) or reputed when weak spot on the vessel wall break (hemorrhagic stroke). Brain stroke, commonly causing paralysis of one half of the body is among the top 3 causes of death and disability in the world (the other two being heart attack and cancer). Stroke brings about a sudden transformation in the sufferer's life. A completely independent person may become paralyzed, making him/her dependent on others for even their basic needs such as bathing, toileting and feeding needs. Moreover, stroke is a major cause of financial burden for the sufferer. The patient is unable to attend to his job due to disability leading to the loss of income. In addition, the treatment of stroke and caring for the stroke patient adds to the financial burden.

Neeyam (2007) says that Preventive measures of stroke are following low salt&low fat diet, regular excersise,quit smoking, limit alcohol, reduce stress, regular blood pressure monitoring, adequate sleep and maintain the normal body mass index.

The American Heart Association (2015) gauges the cardiovascular health of the nation by tracking seven key health factors and behaviors that increase risks for heart disease and stroke. We call these “Life’s Simple 7” and we measure them to track progress toward our 2020 Impact Goal: to improve the cardiovascular health of *all* Americans by 20 percent and reduce deaths from cardiovascular diseases and stroke by 20 percent, by the year 2020. Life’s Simple 7 are: not smoking, physical activity, healthy diet, body weight, and control of cholesterol, blood pressure and blood sugar.

According to the World Health Organization (WHO) updated in 2015, 15 million people suffered stroke worldwide each year. Of these, 5 millions die and another 5 millions are permanently disabled. High blood pressure contributes to more than 12.7 millions strokes worldwide. Europe averages approximately 650000 stroke deaths each year. In American Indians/Alaska native’s per cent adult affected by stroke is 5.3% in African American per cent of adults affected by stroke is 3.2%. In whites per cent adults affected by stroke is 2.5% in Asians per cent of adults affected by stroke is 2.4%.

World stroke Day (2015) is observed on October 29 to underscore the serious nature and high rates of stroke, raise awareness of the prevention and treatment of the condition, and ensure better care and support for survivors. On this day, organizations around the world have facilitated events emphasizing education, testing, and initiatives to improve damaging effects of stroke worldwide. The annual event was started in 2006 by the World Stroke Organization (WSO). The WSO declared a public health emergency in 2010.

G A Mensah et al., (2006) had conducted a study to assess the epidemiology of stroke and high blood pressure in Africa. In the study revealed that more than 90% of patients with stroke, and more than half were found to have high blood pressure. The study concluded that there is need of improved surveillance and the prevention and control of high blood pressure and stroke

Vijayakumari et al., (2012) had conducted descriptive, retrospective cross sectional design was adopted for a hospitalized stroke patients of Neurology wards, C.N Centre, AIMS, and New Delhi.140 stroke patients/relatives were interviewed after the stroke event using a validated interview schedule. The aim of this study was

to identify triggers or precipitators related to the onset of stroke. The results of the present study showed that hypertension was the most common risk factor reported by the study subjects. Unusual mental stress, time of the day, injury/illness within a week prior to the onset of stroke, sitting and standing posture and a change in posture seem to trigger or precipitate the onset of stroke. The study concluded that incidence of stroke can be prevented through modification in life style (refraining from triggers), compliance to treatment and regular follow up.

NEED FOR THE STUDY

"Happiness lies, first of all, in health''.

-George William Curtis

"Blood pressure'' is the force of blood pushing against the walls of the arteries as the heart pumps blood. "If this pressure rises and stays high over time''. High blood pressure (hypertension) can quietly damage your body for years before symptoms develop. There is a natural tendency for blood pressure to rise with age due to the reduced elasticity of the arterial system. Age is therefore one of the factors that needs to be taken into account in deciding whether a person's blood pressure is too high. (Brunner and suddarth-2007)

In general terms, people with a systolic blood pressure consistently above 140mmHg and/or a diastolic pressure over 85mmHg need treatment to lower their blood pressure. People with slightly lower blood pressure (130 to 140mmHg systolic or 80 to 85mmHg diastolic) may also need treatment if they have a high risk of developing cardiovascular disease, e.g. stroke or angina. (Joyce M. Black – 2007)

Hypertension is the most important modifiable risk factor coronary heart disease (the leading cause of death), stroke (the third leading cause), congestive heart failure, end-stage renal disease, and peripheral vascular disease. Therefore, health care professional must not only identify and treat patients with hypertension but also promote a healthy and preventive strategic to decreases the prevalence of hypertension in the general population. (Lewis-2013)

According to the coronary artery Disease in Asian Indians (CADI) Research Foundation (2012), the prevalence of hypertension ranges from 20-40% in urban

adults and 12-17% million in among rural adults. The number of people with hypertension is projected to increase from 118/ million in 2000 to 214 million in 2025, with nearly equal numbers of men and women.

The World Health Organization statistics (2012) reports, released, puts the spotlight on the growing problem and it states that one in three adults worldwide, according to the report, has raised blood pressure – a condition that causes around half of all deaths from stroke and heart disease.

WHO (2015) estimates, that by 2050, 80% stroke cases in the world would occur in low and middle income countries mainly India and China. This is the reason why India has now come out with national guidelines for stroke management. Prepared by Dr Kameshwar Prasad, director of AIIMS' clinical epidemiology unit, along with doctors from Nizam's Institute of Medical Sciences in Hyderabad, Command Hospital in Lucknow and PGI Chandigarh, the guidelines cover the management of stroke from onset to chronic care and focus on patients with first stroke or recurrent strokes.

Dr. Donnell Martin Go, el al., (2010) had conducted a case controlled study in 22 countries worldwide. The aim of the study is to establish the association of known and emerging risk factor with stroke and its primary subtypes and to assess the contribution of these risk factors to the burden of stroke and to explore the differences between risk factor for stroke were patients with acute first stroke (within 5 days of symptoms onset and 72 hr of hospital admission). The results were showed that the risk factors such as hypertension, smoking, diet, and alcohol intake were significant risk factor for ICH stroke. Targeted intervention that reduce blood pressure and smoking, and promote physical activity and a healthy diet, well substantially reduce the burden of study of stroke.

American Heart Association/American Stroke Association (2015) has released an annual snapshot of heart disease and stroke statistics in the U.S., the new report adds a global view. Health data compiled from more than 190 countries show heart disease remains the No. 1 global cause of death with 17.3 million deaths each year. **Stroke-**In 2010, worldwide prevalence of stroke was 33 million, with 16.9 million people having a first stroke. Stroke was the second-leading global cause of death behind heart disease, accounting for 11.13% of total deaths worldwide. Stroke is the

No. 4 cause of death in the United States, killing nearly 129,000 people a year. Stroke kills someone in the U.S. about once every four minutes. African-Americans have nearly twice the risk for a first-ever stroke than white people, and a much higher death rate from stroke. Over the past 10 years, the death rate from stroke has fallen about 35 percent and the number of stroke deaths has dropped about 21 percent. About 795,000 people have a stroke every year. Someone in the U.S. has a stroke about once every 40 seconds. Stroke causes 1 of every 20 deaths in the U.S.Stroke is a leading cause of disability. Stroke is the leading preventable cause of disability.

According to "Heart Disease and Stroke Statistics (2015) Updated a report from the "American Heart Association." That number is expected to rise to more than 23.6 million by 2030, the report found. Stroke remains the No. 2 cause of death in the world. The stroke death rate- the number of deaths per 100,000 people - went down between 1990 and 2010. However, the number of people having first and recurrent strokes each year went up, reaching 33 million in 2010.Here are a few key statistics about heart disease, stroke, other cardiovascular diseases and their risk factors, in addition to commonly cited statistics about the association's research program.

Indian Council of Medical Research (2015) says that Stroke is a major cause for loss of life, limbs and speech in India, estimating there were 9.3 lakh cases of stroke and 6.4 lakhs deaths due to stroke in India, most of the people being less than 45 years old. Experts say that if deaths as well as disability are counted together, then India lost 63 lakhs of disability-adjusted life years in 2004.In India will report 1.6 million cases of stroke annually, at least one-third of whom will be disabled.

WHO (2015) estimates suggest that by 2050, 80% stroke cases in the world would occur in low and middle income countries mainly India and China. This is the reason why India has now come out with national guidelines for stroke management. Prepared by Dr Kameshwar Prasad, director of AIIMS' clinical epidemiology unit, along with doctors from Nizam's Institute of Medical Sciences in Hyderabad, Command Hospital in Lucknow and PGI Chandigarh, the guidelines cover the management of stroke from onset to chronic care and focus on patients with first stroke or recurrent strokes.

Dr Prasad (2015) said that the number of deaths and persons disabled due to stroke is rising in India. Increasing life expectancy at birth, rising urbanization, changing lifestyles and rising stress levels are bound to increase stroke those with high blood pressure, diabetes, high blood fat (cholesterol) are especially at risk. The most important of these risk factors is high BP. In India, more than 16% of people above 20 years of age suffer from high BP. Fifty per cent of those with high BP are not even aware of it. Of those who are aware, only 50% take measures to control it, and of those who take these measures, only 50% are adequately controlled. "Thus, only 12.5% of patients with high BP are adequately controlled,"

The world Health Organization's 'global health statistics' (2012) released the prevalence of hypertension in India is low compared to world. In India, 23.10 per cent men and 22.60 per cent women over 25 years old suffer from hypertension. (Deccan herald newspaper- May 16 2012).

World stroke organization (2012) stated that Strokes are the leading cause of long lasting injury, disability and death. World wide it is the second leading cause of death respectively for 4.4 million of the total 50.5 deaths each year. Someone in the United States dies every 3.3 minutes from stroke. Stroke affects more than 700,000 individuals annually in the US. About 500,000 of these are 1st attacks 200,000 are recurrent attacks. The damages may be temporary or permanent and the function may be partially or completely lost.

According to the World stroke organization (2015) the part of the international public health community, stroke will claim the lives of up to 6.5 million people each year. There is an urgent need to scale-up awareness of global fight against stroke. Information, education and communication initiatives, especially with respect to carrying out a prevention-to-care continuum must be adopted. Real-world experiences in risk reduction, for example, must be better coordinated and documented. In response to this crisis, the World Stroke Organization (WSO), in 2010, launched the World Stroke Campaign to intensify global awareness about the fight against stroke.

The World Stroke Proclamation (2015) as follows "Whereas; stroke is a global epidemic that threatens lives, health and quality of life". "Whereas; much can

be done to prevent and treat stroke, and rehabilitate those who suffer from one". "Whereas; professional and public awareness is the first step to action". And Increase awareness of the public, policymakers, and health professionals about the causes and symptoms of stroke. Send a unified, consistent message throughout the world by coordinating and enhancing existing stroke campaigns to sustain a global effort. Coordinate the efforts of all disease-oriented organizations working to prevent the rise of tobacco use, physical inactivity, and unhealthy diet, contribute to stroke, heart disease, and diabetes.

World Stroke Campaign and World Stroke Day (2015) Objectives are raise awareness on the profound and universal impact of stroke on human life and suffering; Increase understanding of the solutions that exist. Prevention is the most readily applicable and affordable part of knowledge. Key actions must be made to encourage healthy environments to support healthy behaviors. Translate knowledge into action. Tran disciplinary teams must be encouraged to develop expertise and translate evidence into practice. Establish simple but comprehensive stroke units. Stroke units have long proven their worth, even in their most basic form. And, work towards building a healthcare system that responds to the needs of each individual living with the impact of stroke. Generate a movement that stimulates collective responsibility and action. Families, community-based groups, professional societies, national governments and the international community all need to support the delivery of programs and services to all persons affected by stroke, as well as fight for better access to basic health services.

Lifestyle modifications for the prevention of high BP and those are generally the initial steps in managing hypertension. High blood pressure (hypertension) puts extra strain on your and blood vessel. If untreated, over time this extra pressure can increase your risk of a heart attack, stroke and kindly disease. Stress is one of the major causes for hypertension therefore it is necessary to learn to cope with stress. (E-medicine article: 2008)

Hence in the case of high blood pressure, sufficient rest and relaxation are particularly important. Persons suffering from hypertension should ensure that they have sufficient sleep, recreational holiday and relaxing pastimes and avoid unrest and conflicts in everyday life.

Level of education is the most important predictor of knowledge regarding risk factors of hypertension has been increasing since the last decade, health promotion seems essential, so it is essential to prevent this health problem. The researcher play an important role in the prevention of this disease, helps in reducing the mortality rate and improvement of quality of life. Thus the researcher chooses this topic so as to prevent stroke among hypertensive patients.

Statement of the problem

Effectiveness of Self Instructional Module on knowledge regarding the prevention of stroke among hypertensive patients in a selected hospital at Madurai district.

Objectives

1. To assess the level of knowledge regarding prevention of stroke among hypertensive patients.
2. To evaluate the effectiveness of self instructional module on knowledge regarding prevention of stroke among hypertensive patients.
3. To find out the association between the pretest level of knowledge with their selected demographic variables.

Operational definitions

Effectiveness: In this study, it refers to the extent to which the self instructional module will achieve desired effect in gaining knowledge regarding prevention of stroke in terms of difference between pre test and post test level of knowledge measured by semi structured questionnaire.

Self instructional module: In this study, it refers to the systematically organized information prepared by the investigator in the form of booklet, provided to the hypertensive patients regarding prevention of stroke in order to improve their level of knowledge

Knowledge: In this study, it refers to the facts, information acquired through education by hypertensive patients regarding prevention of stroke, as it is elicited through a semi structured questionnaire.

Prevention: In this study, it refers to the measures taken to reduce the risk of stroke among hypertensive patients.

Hypertensive patients: It refers to the individuals both male and females who are diagnosed with systolic blood pressure ≥140 mmHg and diastolic blood pressure ≥ 90mmHg under regular medical treatment and free from stroke

Stroke:

It refers to the rapid loss of brain function duo to disturbance in the blood supply the brain. This can be due to ischemia (lack of blood flow) caused by blockage (thrombosis, arterial embolism), or a hemorrhage.

Hypotheses:

H_1: There is a significant difference between pretest and posttest level of knowledge regarding prevention of stroke among hypertensive patients.

H_2: There is a significant association between pretest level of knowledge and the selected demographic variables of hypertensive patients.

Assumptions:

The study assumed that,

- The hypertensive patients may have inadequate knowledge regarding prevention of stroke.
- Patients with hypertension may develop hemorrhagic stroke in case of irregular treatment or poor awareness.
- Hypertensive patients may have interest to know more about prevention of stroke.
- Self instructional module will enhance the knowledge of hypertensive patients on stroke.

Limitations:

The limitations of the study were

- The study focused only on hypertensive patients.
- The study conducting duration is 6 weeks.
- The sample size is limited to 60 samples.

CONCEPTUAL FRAMEWORK

The present study aim at evaluating the effectiveness of self instructional module on knowledge regarding prevention of stroke among hypertensive patients the framework of the present study based on the general system theory by Ludwig von Bertalanffy (1968)

SYSTEM

A system is a collection of independent but interrelated elements or components organized in a meaningful way to accomplish an overall goal. The function of any system is to convert or process materials, energy or information (inputs) into a product or outcome for use within the system, or outside of the system (the environment) or both. Various system components have functional and structural relationship between each other and are organized in a way to accomplish a specific function or set of functions. To be part of the system any element must have a relationship with at least one element of the system. Any element which has no relationship with any other element of the system cannot be a part of that system.

In this study, the system refers to 60 Hypertensive clients in a Nandhini Nursing Home at Madurai. 60 samples selected by purposive sampling technique.

ELEMENTS:

Elements or components are the things, parts, or substances that make up the system. These parts may be humans, equipment, instruments, etc.

The elements of the system are the various demographic variables that make up the system (Hypertensive Clients). The client selected were having demographic variable age, gender, type of family, monthly income, marital status, diet, educational qualification, occupation, educational qualification,, family history of hypertension, personal habits, family history of hypertension, years of diagnosis ,source of information related to hypertension, taking hypertension treatment regularly. These variables always affect the system.

INPUT

In this study input is the self instructional module on prevention of stroke among hypertensive patients and the researchers effort to plan and organize the teaching program for clients it consist of information related to anatomy of brain & heart, blood pressure, hypertension- meaning, types, etiology, clinical manifestations, complication ,stroke, how hypertension causes stroke, symptoms of stroke, prevention of stroke. A pre-test to assess the existing knowledge of the client was conducted followed by the self instructional module.

THROUGHPUT

Throughput is the processes used by the system to convert energy (INPUTS) from the environment in to products or services that are usable by either the system itself or the environment. Examples include thinking, physical examination of patients, diagnosing, planning, decision making, and taking vital signs.etc.

In the present study throughput is the thinking and analyzing process that goes through the system (hypertensive clients) which is affected by the system variables such us age, gender, type of family, monthly income, marital status, diet, educational qualification, occupation, educational qualification,, family history of hypertension, personal habits, family history of hypertension, years of diagnosis ,source of information related to hypertension, taking hypertension treatment regularly etc,.

OUTPUT

Output is the product or service which results from the system throughput or processing technical, social, financial & human input. Examples include health services better health, documents decision, etc.

In the present study, output was measured by post-test by administering structured questionnaires and finding its result. There was an increase in knowledge of the hypertensive patients.

FEEDBACK

Feedback is information about some aspect of data or energy processing that can be used to evaluate and monitor the system and to guide it to more effective performance. After the effectiveness was found, no interventions were provided. There was an increase in knowledge after administering self instructional module.

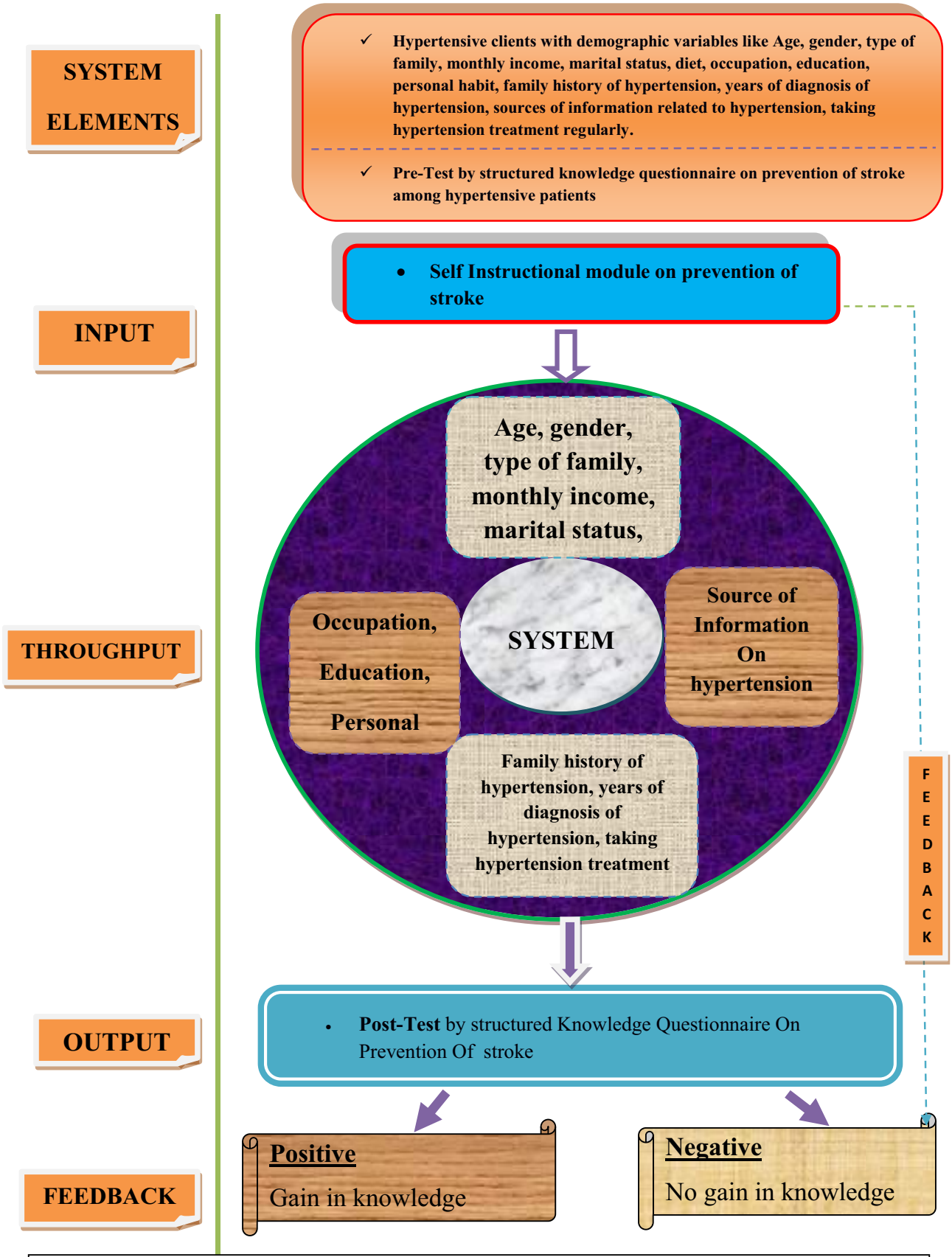


FIGURE: 1 MODIFIED CONCEPTUAL FRAME WORK BASED ON GENERAL SYSTEM THEORY BY LUDWIG VON BERTANLANFFY (1968)

CHAPTER-II

REVIEW OF LITERATURE

Review of literature refers to the activities involved in identifying and searching for information on a topic and developing an understanding of the state of knowledge on that topic. Reviews of literature are also published as freestanding exploration of a body of knowledge. The task reviewing research literature involves the identification, selection, critical analysis and written description of existing information on a topic.

Literature review can search a number of important functions such as identification of the topic, to ascertain what is already known in relation to a problem of interest, to develop a broad conceptual context into which a research problem will fit and to suggest ways to going about the business of conducting a study on a topic of interest. Review of literature is organized and presented under the following headings: Review of literature is organized under the following headings.

1. **Literature related to general information about Hypertension**
2. **Literature related to stroke among Hypertensive Patients**
3. **Literature related to Effectiveness of other teaching programme for improving the knowledge regarding prevention of stroke among Hypertensive patients.**
4. **Literature related to Effectiveness of self instructional module for improving the knowledge regarding prevention of stroke among Hypertensive patients.**

1. Literature related to general information about Hypertension

Patel CH et al., (2013) was conducted study to assess the knowledge, attitude and practice of non-pharmacological measures to control hypertension in the geriatric population in a civil hospital, Ahmedabad. A total of 50 hypertensive patients were interviewed. Their demographic details and responses to the questions were noted in the questionnaire. The result revealed that the mean age of the population was 66.7 years. Sample consisted of 35 males and 15 females. About 76% of respondents said

that walking had a correlation with hypertension but about 67% of patients with hypertension said they practiced walking as a measure to control hypertension. Only 15 of the total respondents were aware of the normal values of blood pressure. About 82% of respondents said that blood pressure should be monitored regularly and about 62% of hypertensives used to measure their blood pressure regularly. About 54% of all respondents said that there is a direct correlation between blood pressure and salt intake. About 42% of respondents were not aware whether salt intake should be reduced in patients with hypertension or not. Only 22% of respondents said that body weight had a correlation with hypertension. Only 32% of respondents said that fruit consumption was related to blood pressure. Only 50% of hypertensives said that they consumed fruits in good amount. About 22% of all respondents said that blood pressure can be controlled with drugs alone. The study concluded that knowledge and practice regarding salt intake, tobacco consumption remains satisfactory, but regarding body weight, fruit intake and correct levels of hypertension remains poor in the study group.

Bowet P (2012) was conducted study to assess the knowledge, attitude and practice of hypertensive patients in Seychelles islands (Indian Ocean). A random sample of 1067 adults aged 25 to 64 years was selected for the study. A structured knowledge questionnaire was used to assess the knowledge, attitude and practice. The study revealed that the age-standardized prevalence of hypertension (screening blood pressure [BP] ≥160/95 mm Hg or taking antihypertensive medication) was 36% in men and 25% in women aged 25 to 64 years ($p<0.001$). Among hypertensive persons, 50% were aware of the condition, 34% were treated, and 10% had controlled BP (i.e., BP <160/95 mm Hg) ($p<0.01$). Most persons, whether non-hypertensive, unaware hypertensive, or aware hypertensive, had good basic knowledge related to hypertension determinants and consequences. The study concluded that these data point to the need to maximize the efficiency of hypertension prevention and control programs so that delay in achieving effective hypertension control can be minimized.

Bansal K Sushil et al., (2012) was conducted evaluvatory study, the prevalence rates reported here are also similar to rates seen in other low-and middle-income countries, with rates inn adult of 29% in rural, and 27% in urban Ghana, and 25% in urban Cameroon. Reports of the prevalence of hypertension in the United States, 38%

in Japan and 40% in Spain in those aged 20 years and older. Hypertension rates in Europe appear to be the highest of any world region with 44% of people aged 35 years and over being hypertensive, compared to only 28% in North America.

Kelias P et al., (2011) had conducted a nationwide population-based steps survey on 3727 participant's age 25 to 64 years in Malawi. The aim of the study is to estimate the detailed finding on the burden of hypertension BP was measured in 3727 participants. The age-standardized prevalence of hypertension was 33.2%. Hypertension was more frequent in males than females (36.9%Vs 29.9%), alcohol drinkers than non-drinkers (40.9%Vs 31.6%), over weight than non-over weight (41.5% Vs 30.7%) and increased with increasing age (21.45% in 25-34 years Vs 59.2% in 55-64 years old). The study concluded that hypertension the most common causes of cardiovascular diseases.

Mohammadirfan MH et al., (2011) cross-sectional study was cross-sectional study conducted to assess the effect of practice on lifestyle risk factors on hypertension among bank employees in Surat, India. A sample consisting of 1493 bank employees were studied (1177 males and 316 females). A pre-tested semi-structured questionnaire was used, which collected information on demographic characteristics and risk factors for hypertension. Clinical observation was also done. The result revealed that overall prevalence of hypertension was found to be 30.4% (455/1493). Among 455 (30.4%) hypertensives, only 197(43%) were aware about their hypertensive status. And among these known hypertensives, 139 (70.5%) were on regular treatment, 71 (51%) were having controlled hypertension among the employees who were on regular treatment. As age increased, the incidence of hypertension also increased significantly in both sexes ($p<.001$). Cases of hypertension were significantly higher among male employees 382 (32.5%) as compared to female employees 73 (23.1%), ($p<.01$). hypertensive cases were higher 35.53% (81) among smokers than non-smoker 29.57% (374). Incidence of hypertension was higher 37.8% (114), in tobacco chewer than non-chewer 28.6% (341). Hypertensive cases were higher 40.1% (149) among alcohol consumers than non-drinkers 27.2% (306). Comparatively hypertension found significantly higher among employees who was not having any healthy habit like walking, jogging, exercise; it was found to be 28.7% (122) excluding patients on treatment ($p<.01$). The

study concluded that lifestyle affects blood pressure so the healthy habits should be promoted among this type of group using different types of interventions.

Jane H et al., (2011) was conducted a study to assess the effect of lifestyle modification on hypertensive patients in America. A sample of 36 individuals participated in the 12-week project, with a 67% retention rate. Weekly sessions included interactive educational and walking components. Initial and final BMI measurements were recorded ($p<01$). Participants completed health risk assessments; pre- and post-questionnaires; and, daily logs of blood pressure measurement, dietary consumption, and physical activity levels. Data were collected from the logs, BMI measurements, and questionnaires. The study revealed that 30 participants (84%) experienced an increase in healthy lifestyle modification adoption resulting in blood pressure control improvement ($p<0.001$). The study concluded that Implementation of healthy lifestyle modifications is crucial in providing quality patient care to hypertensive individuals.

Godfrey et al., (2010) was conducted phenomenological survey study was to determine the knowledge, perception and attitude of hypertensive patients in central hospital Auchi, Nigeria. A cohort of 108 hypertensive patients was selected randomly with their age ranging from 35-80 years (mean=59.05±9.06 years) and the modal age group was 56–60 years (24.1%). A self-structured questionnaire and detailed interview were conducted to collect the data. The study revealed that sixty-six respondents (61%) knew hypertension to be high blood pressure (BP), 22 (20%) thought it meant excessive thinking and worrying while 57 (53%) claimed it was hereditary. Forty-three (40%) felt it was caused by malevolent spirits, 32 (30%) believed it was caused by bad food or poisoning. A few (18%) knew some risk factors. Although 98 (90.7%) felt the disease indicated serious morbidity, only 36 (33.3%) were adherent with treatment and fewer practiced lifestyle modification. Thirty-two (30%) knew at least one antihypertensive drug they used. The study concluded that patients' knowledge of hypertension was low and the attitudes to treatment were negative. Patient education, motivation, and public enlightenment are imperative.

Ike SO (2010) was conducted a study to evaluate the knowledge, perception and practices of lifestyle modification measures among adult hypertensives in

University of Nigeria Teaching Hospital, Enugu, Nigeria. A sample of 260 patients attending the clinic was selected for the study. A pre-tested structured interviewer-administered questionnaire was used to collect data. The study revealed that more than half (54.2%) of the 260 respondents had no formal, or just primary, education. About 25% were no longer taking their antihypertensive medication. Fifty percent of the patients thought that hypertension was caused by stress. Most knew about the lifestyle measures through health personnel. More than 50% adopted the lifestyle-modification measures once they became aware of their effects ($p<0.001$). The study concluded that participants had a poor perception of hypertension and awareness of the lifestyle-modification measures through the mass media, but a high level of willingness to adopt the lifestyle measures.

Peltzerk et al., (2008) had conducted a national, population-based, cross-sectional study with a sample of 3,840 subjects aged 50 years or older in South Africa. The questionnaire included socio-demographic characteristics, health variables and anthropometric and blood pressure measurements. The aim of the study was to investigate the prevalence and associated factors of hypertension in a national sample of older "South Africans who participated in the study global aging and adult" health (SAGE). The results shown that the prevalence of hypertension in the sample population was 77.3% these data underscore the urgent need to strengthen the public health education and blood pressure – monitoring systems to better manage hypertension among older adults in South Africa.

Zafar Syed Nabeel et al., (2008) had carried out a cross-sectional study on a random sample of 440 people in Karachi, Pakistan using on interview based questionnaire. The results showed that hypertensive had a higher awareness score than the normotensives ($P<0.001$). It was observed that people below 30 years of age were significantly more aware then people above this age ($P<0.001$). Patients with higher awareness scores were more compliant to therapy ($p<0.001$). Poor levels of awareness regarding the risk factors presenting features and complication of hypertension were observed in both the groups. The hypertensive population was relatively more aware than the normotensives population.

Drivenhorn E (2008) was conducted explorative study on outcome following lifestyle changes with hypertensive patients in Goteborg, Sweden. All 177 patients

diagnosed with hypertension visiting a health centre were selected for the study. A structured nursing intervention programme was conducted on hypertension care and lifestyle modification. The study revealed that systolic blood pressure decreased overall in 3 patients ($p < 0.01$) with high alcohol consumption, two smokers stopped smoking, two new diabetics were discovered, physical activity increased (p¼=0.035) and one-third of the patients changed their medication. The study concluded that as a result of the intervention the lifestyle of the people was changed, the level of exercise increased a reduction in systolic blood pressure and in women's weight were obtained. The study also stated that counseling following a hypertension programme gives hypertensive patients a chance to execute lifestyle changes and have their medication adjusted to achieve goals for blood pressure control.

2. Literature related to stroke among Hypertensive Patients:

Chiquete et al., (2013) had conducted a study in Mexico with 316 patients (50% women, Mean age: 64 years, 75% with hypertension history) with stroke. The objective was to analyze the clinical impact of BP at hospital arrived in patients with stroke. The first BP reading at admission was evaluated for its association with neuroimaging findings and outcome. A Cox proportional hazards model and Kaplan-Meier analyses were constructed to evaluate factors associated with in-hospital mortality. Systolic BP (SBP) >190 mm Hg was independently associated with in-hospital mortality in stroke (n = 285) ICH for the highest vs. the lowest quartile even after adjustment for known strong predictors (age, Glasgow coma). The study concluded that a high BP on admission is associated with an increased risk of stroke.

Rodiguez-Luna et al., (2013) had conducted a study with total, 117 consecutive patients in Spain with acute (<6 h) stroke underwent baseline and 24-h CT scans. CT angiography for the detection of the spot sign and noninvasive BP monitoring at 50 minute interval over the first 24-h. The aim of the study is to estimate the impact of BP changes and clinical outcome of patients with stroke SBP and MAP loads were designed as the proportion of readings >180 and >130mm Hg respectively stroke yearly clinical neurological deterioration and 3 months mortality were recorded. The results were shown that base line BP variables were unrelated to either stroke or clinical outcome. The study concluded that in patients with strokes SBP 180 load independently predicts strokes.

Osama Shukir Muhammed Amin et al., (2012),had conducted a prospective, consecutive, case series at the sulaimaniya general teaching hospital Iraq with all patients (n=4) were females and their ages ranged from 58 to 72 years. The aim of the study was to explore the pattern of stroke and outcomes of recurrent hypertensive stroke survived patients with stroke were followed-up for a variable time; 4 patients only developed a recurrence. All patients underwent serial non contrast CT brain scanning on the first and second presentation and after variable intervals. The clinical presentation and their outcomes, the sites of the hemorrhages, long-standing hypertension and hypercholesterolemia were noted. The study concluded that all the patients with functional outcome after the first hemorrhage was relatively good in the majority but the second stroke resulted in prominent neurological dysfunction. Recurrent stroke was rare among our patients but resulted in profound neurological functional impairment.

Ting Zhang et al., (2011) had conducted a study among 692 patients, consisting of 540 ischemic stroke patients and 152 hemorrhagic stroke patients in East China. The objective of the study was to investigate the different effects on ischemic versus hemorrhagic stroke and to enhance the prevention to decrease the incidence. Leukocytosis, hypertension and family history of hypertension were the significant factors associated with hemorrhage stroke versus ischemic stroke. Obesity, family history of hypertension, family history of stroke, hypercholesteremia and myocardial ischemia were the significant factors with ischemic stroke. The results showed that the most prominent factors for overall stroke in East China were hypertension, followed by higher pulse pressure and hypercholestremia.

Spydrion et al., (2011) had conducted with consecutive 191 patients in Roman. The aim of the study is to estimate the incidence causes locations and prognosis of stroke in people aged≤35years. The found 8 cases of stoke in young people (≤35years). The most frequent risk factors were hypertension, tobacco used and alcohol used. HS is young people are mainly located in the basal ganglia. Mortality and morbidity in the acute phase or low and are related to hypertension as the case of Stroke.

A R Bhat et al., (2010) had conducted a retrospective study in the neurosurgical centre of Jammu and Kashmir among all patients information from the

case it, patients files discharge certificate, death certificate. The objectives of the study is to study the prevalence and outcome of spontaneous stroke in Kashmir compared with other parts of the world analysis of variance and students t-test were used at occasion. The result showed that incidence of stroke in Kashmir is about 13/1000000 persons per year comprises 31.02 % of total stroke and aneurysm ruptures are cause of 54.35% SAH. The female suffers 1.78 times more than the male. The study concluded that food habits, winder season, female gender, hypertension and inhalation of smoke or special risk factors of SAH, in Kashmir's.

Choi Cu et al., (2009) had conducted a descriptive duty estimating probability of stroke in hypertensive patients in Korea. The aim was to investigate the distribution of stroke risk factor and 10 year probability of stroke in Korean hypertensive patients. The sample size was 1402. The tool used for this study laboratory test and physical examination, and the 10 year probability of stroke was determined by applying the Framingham stroke risk equation. Results suggested that 10 year probability in patients with hypertension increased in proportion to age and blood pressure. The study concluded that aggressive intervention or mandated to reduce blood pressure and alleviate the risk of stroke in hypertensive patients.

Amanulrah et al., (2009) had conducted a study in Pakistan with 100 patients of stroke were collected for the study. The objective was to know the frequency of cerebral infraction and hemorrhage in 100 patients of stroke in a period of 1 year. Data was collected by consecutive sampling. In this study it assessed through a detailed history of hypertension, diabete, smoking, previous stroke, TIA, previous MI Angina, atrial fibrillation, alcohol intake, drugs used for hypertension/diabetes. Blood pressure was recorded at arrival and 24 hours after admission average blood pressure was 180/100mm Hg. Hypertension is the leading risk factor in stroke patients.

K Bestehorn et al., (2008) had conducted a cross-sectional study about 2482 primary-care practices throughout Germany included 47,394 consecutive unselected patients with diagnosed hypertension. The aim of the study is to assess the risk factor profile of hypertensive patients in primary care in various age groups, and to calculate their corresponding risk of stroke. Mean systolic/diastolic blood pressure was 147/86mmHg only 29.1% of patients had on SBP<140 mmHg, and 60.2% had a DBP <90 mm Hg. The mean 10-risk tear risk of stroke was 26% in the total cohort. The

result showed that co-morbidities relevant for total stroke risk very prevalent among typical primary-care patients, conforming a substantial burden of disease in this settings. The need for more aggressive BP control and treatment of modifiable risk factors is confirmed by the results.

Mania G et al., (2008) had conducted cohort study on blood pressure control and risk of stroke in treated and untreated hypertensive patients in Italy. The aim was assess the risk of stroke in hypertensive patients. 10 consecutive patients were selected and grouped in to treated and untreated hypertensive patients and the data collected through history collection and physical examination. The results showed that in treated hypertensive patients controlled blood pressure values occurred in 18.4% and untreated hypertensive patients were grade one or two. The researcher concluded that more attention to be paid for the hypertension.

Huriletemuer et al., (2008) had carried out a study at the Beijing Huda Genome Company, Beijing, and the clinical Testing Center of Inner Mongolia College, Hohhot, P.R. China from Match To November, and included 96 patients with hypertension (control group) with an average age of 53≒11 years, and 68 patients with hypertension stroke with an average age of 60≒10 years. The aim of the study is to identify susceptible single nucleotide polymorphisms causing prevailing essential hypertension complicating stroke in the Mongolian population. The results were shown that Logistic multiple regression analysis revealed significantly correlate to hypertension stroke.

Volpe Massimo et al., (2008) had conducted a large scale observational study in Italy among 12792 patients with hypertension. The objective of the study to estimate the risk of stroke, poor blood pressure controlled and higher cordial vascular risk. Data from a subsequent visit within 6 months, to evaluate the impact of systematic stroke risk assessment, 1800 general practitioners recruited. The data were recorded in to a Framingham-based stroke risk score and computed using a risk calculator. The result showed that between the two visit the percentage of patients with controlled blood pressure(<140/90mmHg)increase substantially in all subgroups, being grater in patients who were not treated at base line the researcher concluded that the assessment of stroke risk and increased awareness of stroke risk factors by general practitioners is associated with improved blood pressure controlled, reduce

cardiovascular risk profile and a prompt reduction in the 10 year estimated risk of stroke.

S Seshadri et al., (2008) had conducted a cohort study among 4897 participants who were stroke free. The objective of the study is to assess the life time risk (LTR) of stroke which was not being reported for the US population. The result stated that a total of 875 participants developed a first ever stroke; 749 had on ischemic stroke participants with a normal BP (<120</80 mmHg) had approximately half the LTR of stroke compared with those with high BP (≥140/90mm Hg). Thus the study concluded standing that the LTD of stroke in Middle-aged adults is 1 in 6 or more. BP is a significant determinant of the LTR of stroke, and promotion of normal BP levels in the community might be expected to substantially reduce this risk.

Khealani et al., (2008) had conducted a Cohort study at the Age Khan University Hospital (AKUH), Karachi. The aim of the study is to identify the factors that predispose to ischemic versus hemorrhagic stroke in hypertension patients. All the hypertension patients, who were registered in AKUH acute stroke outcome data base, over a period of 22 months, were identified and from this cohort the patients with first ever stroke were selected. The data regarding demographics, stroke type (ischemic vs. Hemorrhagic), pre-existing medical problems, laboratory and radiological investigations were recorded and analyzes. The result shown that Five hundred and nineteen patients with either ischemic stroke or parenchymal hemorrhage were registered over a period of 22 months. Three hundred and forty-eight patients (67%) had hypertension and of these, 250 had first ever stroke at the time of admission.

Yanagawa et al., (2007) had conducted a study in Japan with 48 patients with hypertensive intracerebral hemorrhage or cerebral infraction with hypertension (these disease were defined as stroke) were treated in National Defense Medical College. Asymptomatic small hemorrhages were identified in hypertensive patients by T2 weight gradient echo magnetic resonance (MR) imaging to investigate the relationship between hypertensive intracerebral hemorrhage and asymptomatic minute hemorrhages. All patients had no past history of stroke or head injury, underwent MR imaging within 6 months of the stroke attack, were aged from 40 to 80 years, and had no diagnosis of aneurysm, angioma. Patients were divided into the in fraction group

and hemorrhage group. The incidence of minute hemorrhages in the hemorrhage group (21/26) was greater than in the infraction group (9/22, $p<0.01$). The incidence of minute hemorrhages is the basal ganglia (18/26) was greater in the hemorrhage group than in the infraction group (4/22, $p<0.001$).

3. Literature related to Effectiveness of other teaching programme for improving the knowledge regarding prevention of stroke among Hypertensive patient.

JM Boulanger et al., (2013) had conducted an educational programme on hypertension to prevent stroke in Canada. The aim of the study was to update the evidence-based recommendations for the prevention stroke and treatment of hypertension in adults. Randomized controlled study was used. The study suggested that for lifestyle intervention, blood pressure lowering was accepted as a primary outcome. The study recommended that to prevent stroke and treat hypertension include sodium restricted diet, perform 30 min to 60 min of moderate aerobic exercise four to seven days per week; maintain a healthy body weight and waist circumference, limit alcohol consumption; follow a diet that emphasizes fruits, vegetables and low-fat dairy products, dietary and soluble fiber, whole grains and protein from plan sources, and that is low in saturated fat and cholesterol.

Kevi (2012) had conducted quasi experimental study to assess the effectiveness of individual teaching programme on knowledge and practice regarding lifestyle modification among patients with hypertension in selected urban community at Mangalore. pre test level of knowledge (35%), post test level of knowledge (92%).the study concluded that individual teaching programme was very effective to improve knowledge and practice regarding lifestyle modification among patients with hypertension

Alla-ud-Dim Abro et al., (2010) had carried out study in Jamshoro, Pakistan with 100 hypertensive patients to prevent stroke (64men, 36 women). The aim of the study is to educate the patient to control high blood pressure. Each patient was examined in detail, and investigated for blood pressure measurements. the maximum number (36) of patients belongs to severe hypertension (p, 0.05). The study concluded that video assisted teaching was very effective to improve knowledge about control hypertension to prevent hypertension.

Mrs. Ratna kumari (2008) had conducted evaluvatory study on effectiveness of structure teaching programme on knowledge and skill regarding home care management of hypertension in a selected community area at Chennai, 30 samples were selected using non-probability convenience sampling technique a pre-experimental, one group pre-test and post test design was adopted. the pre & post test knowledge and skill scores were compared, pre-test mean value is 18.2 and in post - test found that most of the patients adequate knowledge (26.73%).this study concluded that step was very effective in improve the knowledge and skill regarding home care management of hypertension.

LB Gold Stein et al., (2008) had conducted a study on stroke prevention by aggressive reduction in cholesterol levels (SPARCL) study. A sample of 4731 hypertensive patients. The aim of the study is to educate the patients reduce cholesterol by using lecture method. Cox multi variables regression used including base line variables significant in variable analysis showed that event ($p<00.1$) in men, and with age ($p=0.001$).this study concluded that lecture method was very effective in improve the knowledge a regarding prevention of stroke.

4. Literature related to Effectiveness of self instructional module for improving the knowledge regarding prevention of stroke among Hypertensive patients.

Chandra Babu (2013) was conducted study to assess the effectiveness of a SIM on the knowledge of lifestyle modification in hypertensive patients in Mediscope Hospital, Bangalore. The sample consisted of 30 patients with hypertension, both male and female. A structured knowledge questionnaire organized on the basis of lifestyle modification aspects such as general health, stress reduction, and psychosocial wellbeing was used as the data collection tool. The study revealed that 25 patients (83.3%) had inadequate knowledge, 5 (16.7%) of them had moderately adequate knowledge and none of them had adequate knowledge in the pre-test. Post-test knowledge score revealed that majority 21 (70%) of them had moderately adequate knowledge, 9 (30%) had adequate knowledge, and none had inadequate knowledge. The study concluded that there was a significant difference between the pre-test and post-test knowledge scores. Hence the SIM was effective in imparting knowledge on lifestyle modification of hypertensive patients.

Dekipid et al., (2012) had conducted an educational programme on hypertension to prevent stroke in Canada. self instructional module was used. The aim of the study was to update the evidence-based recommendations for the prevention stroke and treatment of hypertension in adults. Randomized controlled study was used. SIM contains that lifestyle intervention; blood pressure lowering was accepted as a primary outcome. The study recommended that to prevent stroke and treat hypertension include sodium restricted diet, perform 30 min to 60 min of moderate aerobic exercise four to seven days per week; maintain a healthy body weight and waist circumference, limit alcohol consumption; follow a diet that emphasizes fruits, vegetables and low-fat dairy products, dietary and soluble fiber, whole grains and protein from plan sources, and that is low in saturated fat and cholesterol.pre test knowledge level (45%) and post test knowledge level(96.3%).the study concluded that SIM was very effective to improve the knowledge.

John Shine (2012) had conducted evaluvatory study on effectiveness of self instructional module on knowledge and skill of home maker regarding home care management of hypertensive patients in a selected hospital at Mumbai, 30 samples were selected using non-probability convenience sampling technique a pre-experimental, one group pre-test and post test design was adopted. the pre & post test knowledge and skill scores were compared , pre-test mean value is 17.2 and in post - test found that most of the patients adequate knowledge(96.73%).this study concluded that step was very effective in improve the knowledge and skill of home maker regarding home care management of hypertension

Diviya (2012) was conducted study to assess the impact of self instructional module (SIM) on knowledge regarding the prevention of stroke among hypertension (information technology) employees at selected company in banglore.60 samples selected, pre test level of knowledge(45%),post test level of knowledge (98%).the study concluded that SIM was very effective to improve knowledge regarding prevention of stroke

CHAPTER – III

RESEARCH METHODLOGY

This chapter deals with the methods adopted by the researcher to find out the effectiveness of self instructional module on knowledge regarding prevention of stroke. It deals research approach, research design, the setting, population, and sample size, sampling technique, development and description of tool, validity, reliability, pilot study and procedure for data collection for data analysis

Research approach:

Evaluatory approach was used in this study. It aimed to evaluate the effectiveness of self instructional module on knowledge regarding prevention of stroke.

Research design:

Pre experimental one group pre test post test design was adopted for this study

GROUP	PRE-TEST	EXPERIMENT	POST TEST
E	O_1	X	O_2

TABLE-1:RESEARCH DESIGN

E - Experimental group

0_1 – Pretest assessment of knowledge regarding prevention of stroke

X - Self instructional module

0_2- Posttest assessment of knowledge regarding prevention of stroke

Variables under the study

1. Independent variables

Self instructional module rendered by the research to the hypertensive patients on prevention of stroke was independent variable in this study

2. Dependent variables

Knowledge of hypertensive patients regarding prevention of stroke was dependent variable in this study.

Setting of the study:

The study was conducted in Nandhini Nursing Home at Madurai, which 30kms away from our Nursing institute. This hospital is a 50 bedded hospital, approximately 350 outpatients and 50 in-patients with hypertension are admitted per month.

Target population:

Hypertensive patients who are attending the hospital OPD

Accessible population:

Hypertensive patients at Madurai district.

Sample:

Hypertensive patients who are taking treatment in the Nandhini Nursing Home, Madurai and who meet the inclusion criteria

Sample size:

Sample size consisted of 60 Hypertensive patients who are all taking treatment in the Nandhini Nursing Home, Madurai

Sample technique:

Non probability – purposive sampling technique was used for this study.

Criteria for sample selection:

The samples are selected based on the following inclusion and exclusion criteria.

Inclusion criteria:

- Hypertensive patients.
- Hypertensive patients free from stroke
- Hypertensive patients who are available during the time of data collection.
- Hypertensive patients who are willing to participate in the study.

Exclusion criteria:

- Hypertensive patients who have attended any hypertensive camps on prevention of stroke
- Those people who cannot read and understand Tamil and English.

Research tool and technique:

The instruments used in this research study consisted of three sections.

Section A

It comprised of demographic variables such as age, gender, type of family, monthly income, marital status, diet, and occupation, and education, personal habits, family history of hypertension, source of information related to hypertension, duration of hypertension, and treatment of hypertension.

Section B

It comprised of semi structured questionnaire to assess knowledge regarding prevention of stroke among hypertensive patients. It was edited as per the blueprint and different content area. It consist of 30 multiple choices question. Part I: it consisted of general information regarding hypertension (included 14 questions) Part-II: it consisted of stroke (included 6 questions), Part-III: it consisted of prevention of stroke among hypertensive patients (included 10 questions).

Scoring Procedure:

There were four choices, out of which one was correct answer and the remaining three where wrong answers. A score of 'one' was allotted to each correct response. 'zero' was rewarded for the wrong response. Thus there were 30 maximum obtainable scores. The level of knowledge was graded based on percentage of scores obtained

Level of knowledge

Adequate (Above 75%)

Moderate (50% – 75%)

Inadequate (Below 50%)

Section c

It comprised self instructional module on knowledge regarding prevention of stroke among hypertensive patients. The content on prevention of stroke was selected through literature search and in consultation with experts. The content of the self instructional modules was organized well by the following headings;

- Anatomy and physiology of brain and heart
- Meaning of blood pressure
- Meaning of hypertension
- Causes of hypertension
- Signs and symptoms of high blood pressure
- Main complication of hypertension
- Meaning of stroke
- Types of stroke
- How hypertension causes stroke
- Symptoms of stroke
- Preventive measures for stroke

Content validity:

Assessment tool was evaluated by experts from the field of nursing and medicine for content validity. Suggestions were considered and appropriate changes were done and to made the tool to be valid.

Reliability:

The data were collected from 10 samples to find out the reliability. The split half method was used to establish the reliability of the tool. This was done by splitting the items into odd and even items. The reliability coefficient of the whole test then estimated and the value obtained was (r=0.94) which indicates that tool is reliable.

Pilot study:

Pilot study was conducted in Nandhini nursing home at Madurai for the period of one week 6 hypertensive patients in order to test the feasibility, relevance and practability of the tool. A result shows that the tool was feasible to carry out the main study.

Data collection procedure:

The investigator met the head of the institution in order to establish support and co-operation to conduct the study successfully. The formal prior permission was obtained from the director of Nandhini nursing home, Madurai for main study. The investigator introduced herself to the hypertensive patients and established rapport with them. The study was conducted for period two weeks. The investigator selected the sample that fulfilled the inclusion criteria. The informed consent was obtained. Appropriate orientation had given to the subjects about the aim of the study, nature of questionnaires and adequate care was taken for protecting the subjects from potential risk including maintain confidentiality, security and identity. The demographic variables collected from the subjects. The pre test was done to assess the hypertensive patient's knowledge through semi structured questionnaire. Self instructional module was administered. The post test of study was carried out one week later, using same tool as the pre test. Collected data was then tabulated and analyzed.

Plan for data analysis:

Data analysis was done according to the objectives of the study. Both descriptive and inferential statistics were used.

- Analysis of the demographic data was done by frequency, mean, percentage.
- Paired' test was used to determine the difference between the pre test and post test score in terms of effectiveness of self instructional module.
- Chi square test was used to determine the association between the selected demographic variables.

Protection of human rights:

Research proposal was approved by the dissertation committee, RASS academy College of Nursing, Poovanthi. Prior to the study oral consent of each teachers was obtained before starting the data collection. Assurance was given to the teachers that confidentiality would be maintained.

CHAPTER- IV

ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with the description of the samples, analysis and interpretation of the collected data. The data collected were tabulated, analyzed and presented based on objectives and hypothesis.

It consists of the following sessions:

Section I **:** Description of samples according to their demographic variables.

Section II **:** Description of samples according to their pre-test and Post-test level of knowledge

SectionIII **:** Comparison of mean pre-test and mean post-test level Knowledge.

SectionIV **:** Association of pre-test level of knowledge and their selected demographic variables.

SECTION: I

Description of samples according to their demographic variables.

Table 2: Description of sample according to their demographic profile

(n=60)

S.NO	DEMOGRPHIC VARIABLES		FREQUENCY	PERCENTAGE %
1	Age (in years)	40-45	10	16.7
		46-55	27	45.0
		56-65	23	38.3
2	Gender	Male	38	63.3
		Female	22	36.7
3	Type of family	Nuclear	45	75.0
		Joint	15	25.0
4	Monthly income	3000-8000/month	44	73.3
		8001-14,000/month	10	16.7
		14,001-20,000/month	05	8.31
		20,001 & above	01	1.70
5	Marital status	Unmarried	08	13.3
		Married	52	86.7
		Divorced	0	0
6	Diet	Vegetarian	08	13.3
		Non-vegetarian	52	86.7
7	Occupation	Government job	17	28.3
		Private job	05	8.30
		Home maker	14	23.4
		Retired	24	40.0
8	Education	Illiterate	08	13.3
		Primary education	15	25.0
		Secondary education	31	51.7
		Graduate and above	06	10.0
9	Personal habits	Smoking	07	11.7
		Alcoholism	13	21.7
		Smoking & alcoholism	17	28.3
		No such habits	23	38.3

10	Any family history	Yes	33	55.0
		No	27	45.0
11	Years of Diagnosis	Less than 1 year	27	45.0
		2- 3 years	11	18.4
		4- 5 years	17	28.3
		More than 5 years	05	8.31
12	Source of Information	Friends and relatives	20	33.3
		Health personals	11	18.4
		Mass media	29	48.3
		Others	0	0
13	Hypertension treatment	Yes	20	33.3
		No	40	66.4

Table 2 summarizes that demographic characteristics of hypertensive patients among 60, with regards10 (16.7 %) were 40 to 45 years of age, 27 (45%) were having 46to 55 years of age and 23 samples (38.3%) were 56 to 65 years of age. In case of sex, majority of the hypertensive patient 38 (63.3%) were male and 22 female was (36.7%). Findings related to types of family 45 (75%) were comes under nuclear family and 22 (25%) were comes under join family. Regarding family monthly income 44 (73.3%) were earning rupees 3000 to 8000, 10 (16.7%) were earning rupees 8001 to 14000, 5 (8.3%) were earning 14001 to 20000 and 1 (1.7%) were earning rupees above 20001. Regarding marital status 52 (86.7%) were married, 8 (13.3%) were unmarried and 0(0%) were divorced. Regarding food habits, 8 (13.3%) were vegetarian and 52 (86.7%) were non vegetarian. Regarding occupation, 17 (28.3%) were government job,5 (8.3%)were private job,14 (23.4%) were home maker and 24 (40%) were retired .Regarding education ,8 (13.3%) were illiterate, 15 (25%) were primary education,31 (51.7%) were secondary education,6 (10%)were graduate and above . Regarding personal habits 7 (11.7%)were smoking,13 (21.7%)were alcoholism,17 (28.3%) were smoking and 23 (38.3%)were no such habits .Regarding any family history of hypertension,33 (55%) were having hypertension and 27 (45%) were not having hypertension . Regarding duration of hypertension, 27 (45%) were diagnosed less than one year, 11 (18.4%) were diagnosed 2 to 3 years, 17(28.3%) were diagnosed 4 to 5 years and 5 (8.3%) were more than 5 years.

Regarding source of information about hypertension, 20 (38.3%) were friends and relatives, 11 (18.4%) were health personals, 29 (48.3%) were mass media and 0 (0%) were from others .Regarding treatment, 20(33.3%) were taking treatment and 40 (66.4%) were not taking treatment regularly

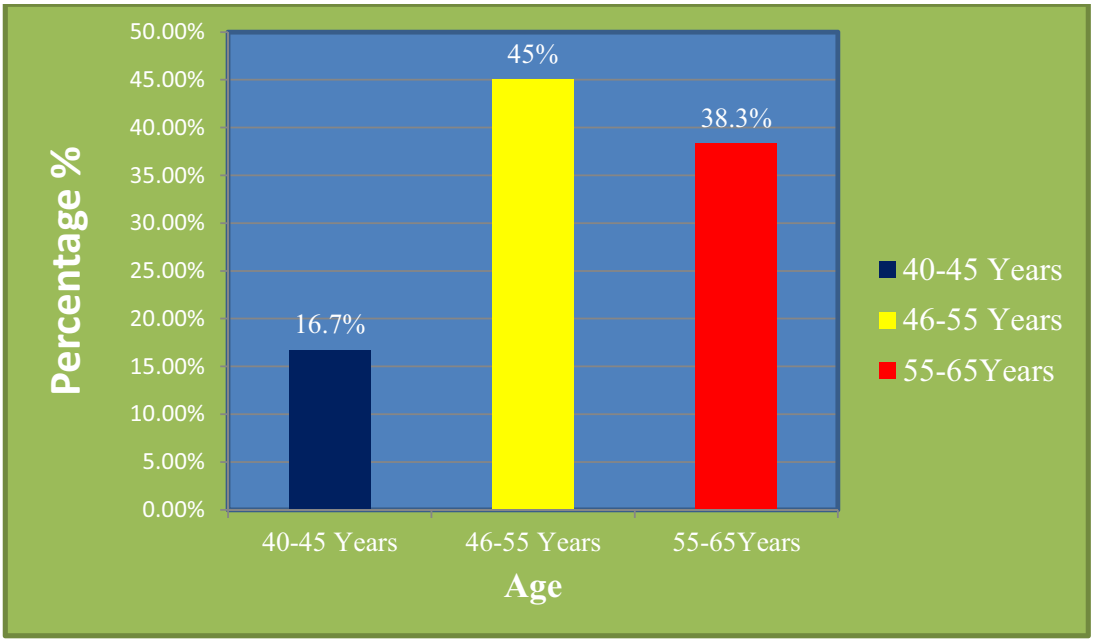


Figure 2: Distribution of samples according to their age

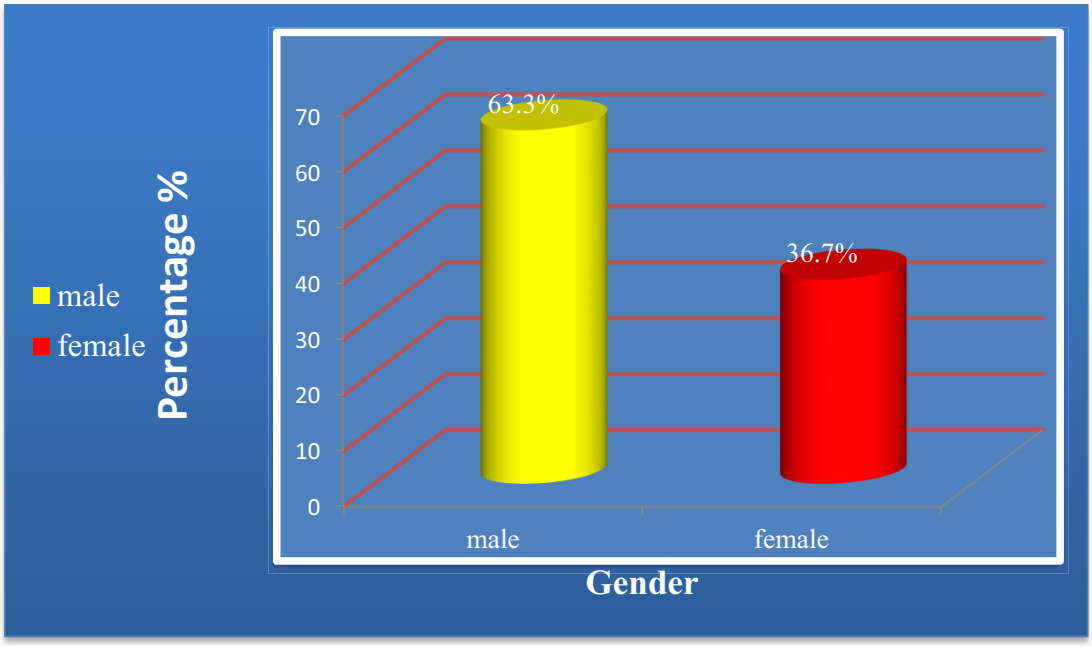


Figure3: Distribution of samples according to their gender

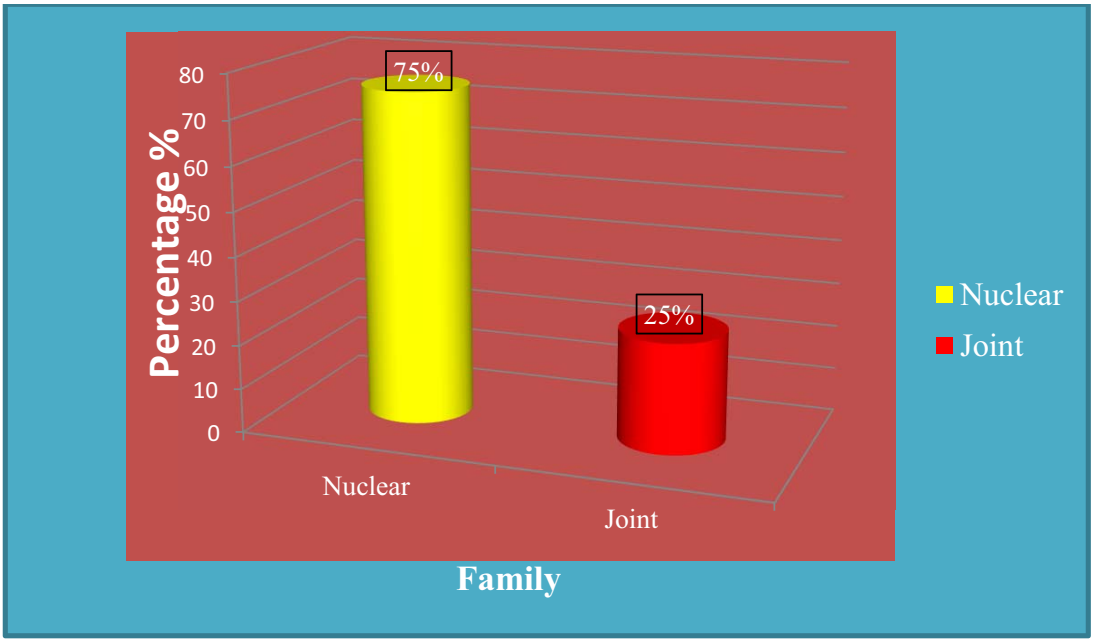


Figure4: Distribution of samples according to their types of family

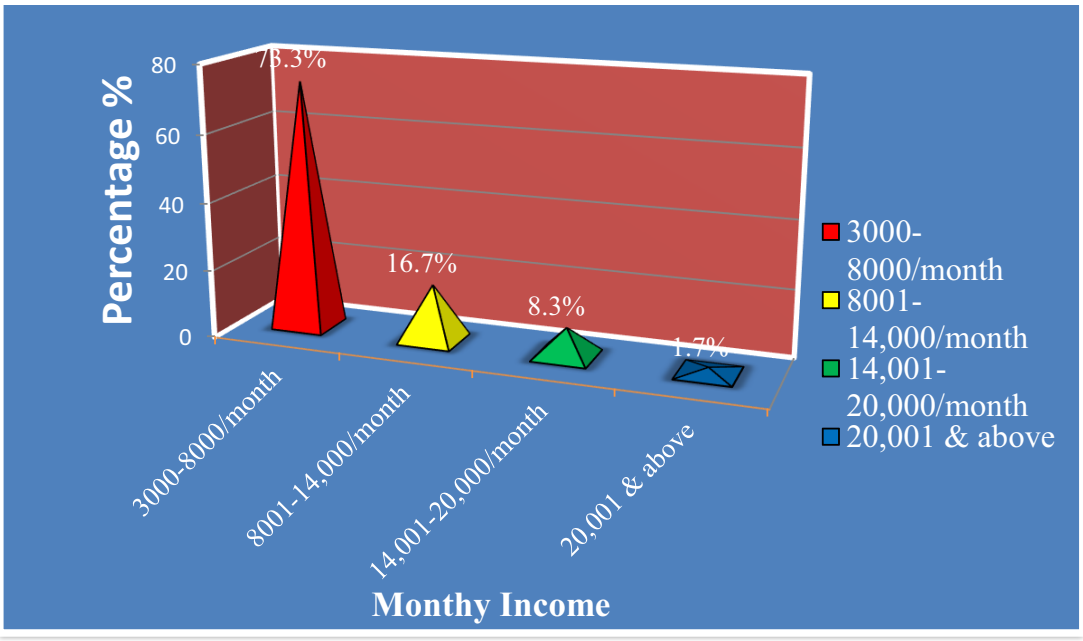


Figure5: Distribution of samples according to their family monthly income

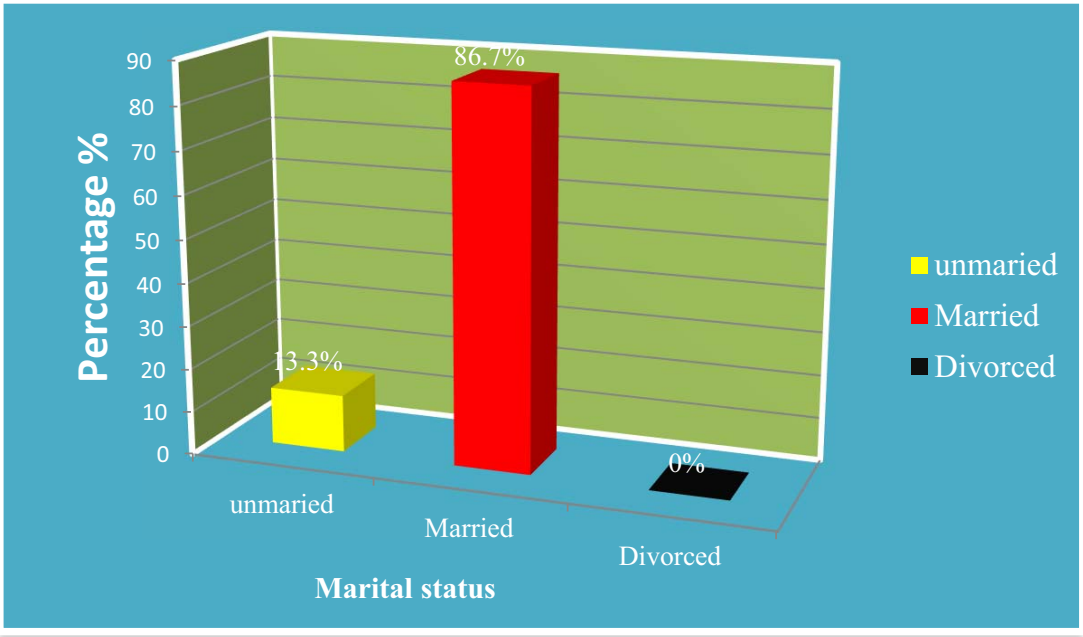


Figure6: Distribution of samples according to their marital status

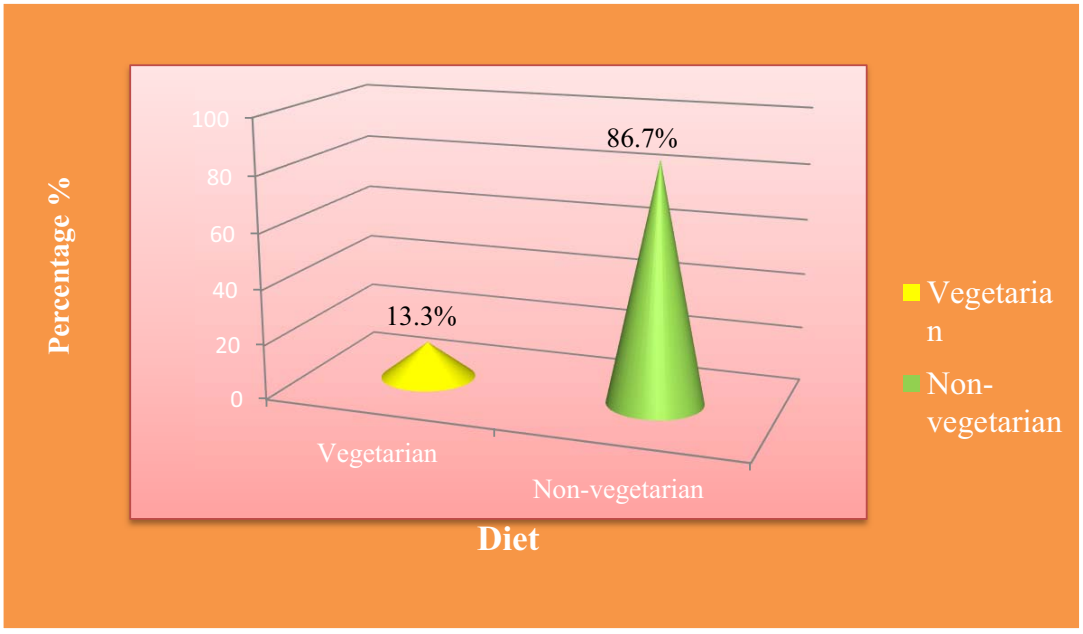


Figure7: Distribution of samples according to their diet

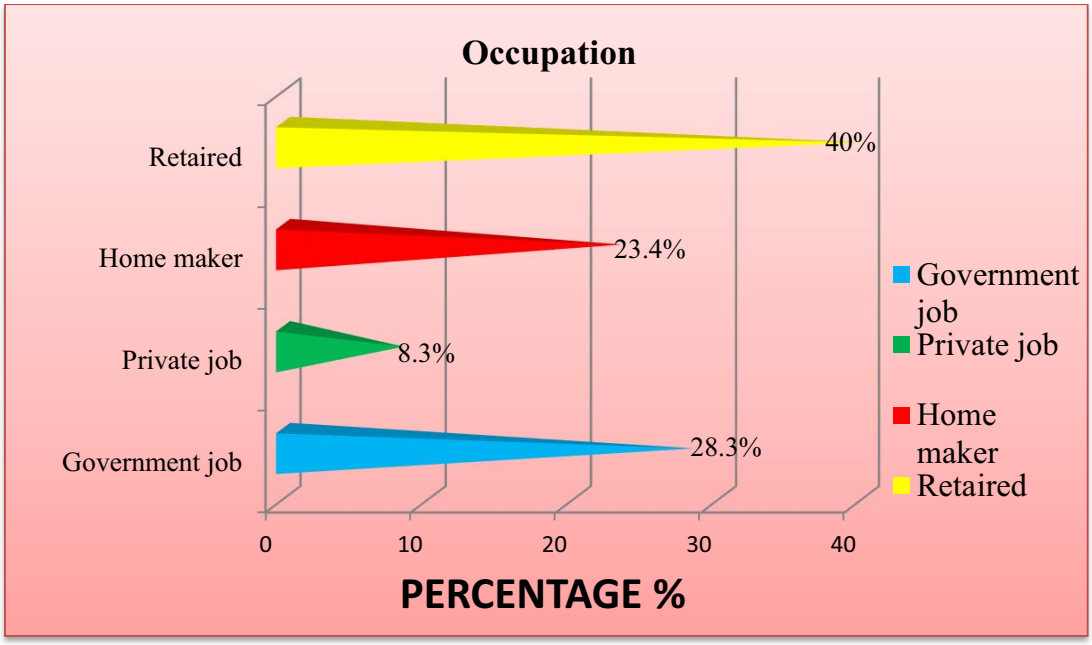


Figure8: Distribution of samples according to their job

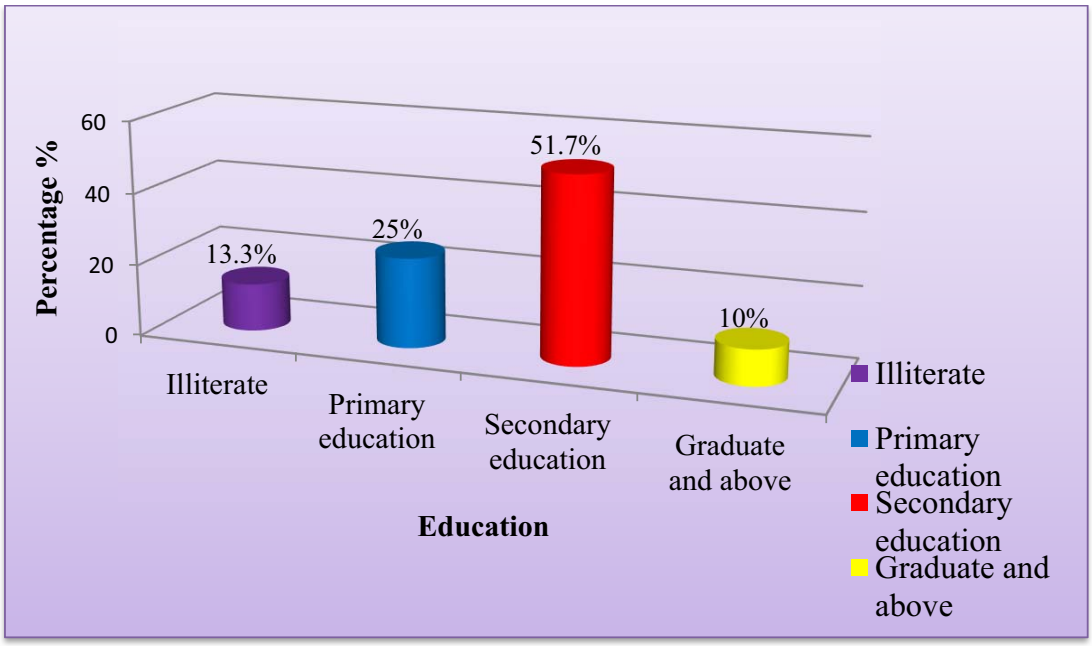


Figure9: Distribution of samples according to their educational status

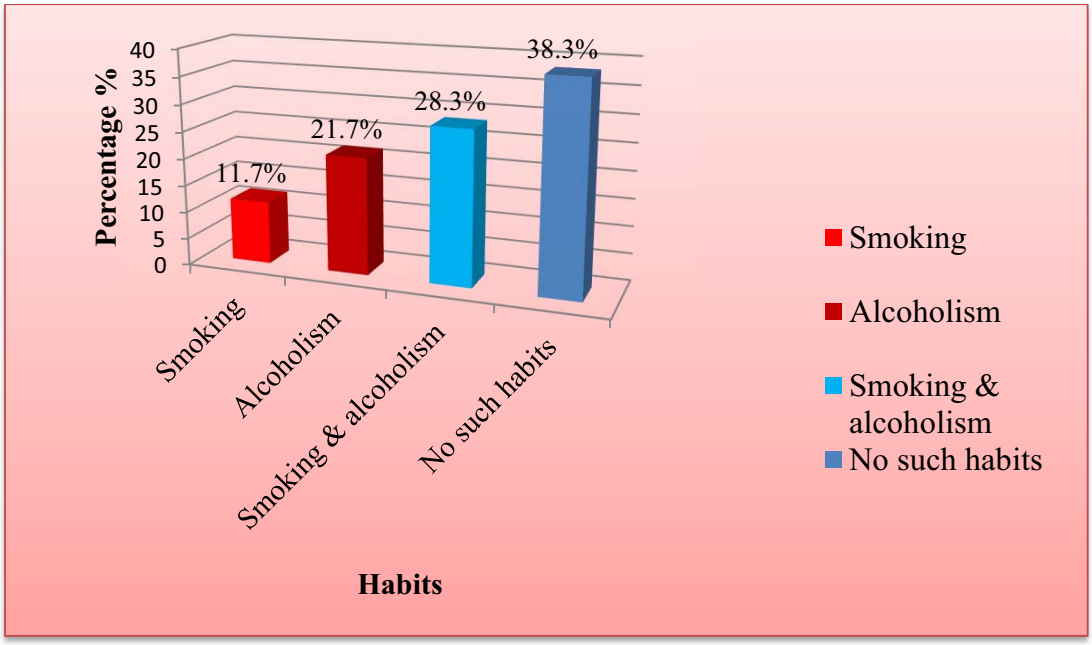


Figure10: Distribution of samples according to their personal habits

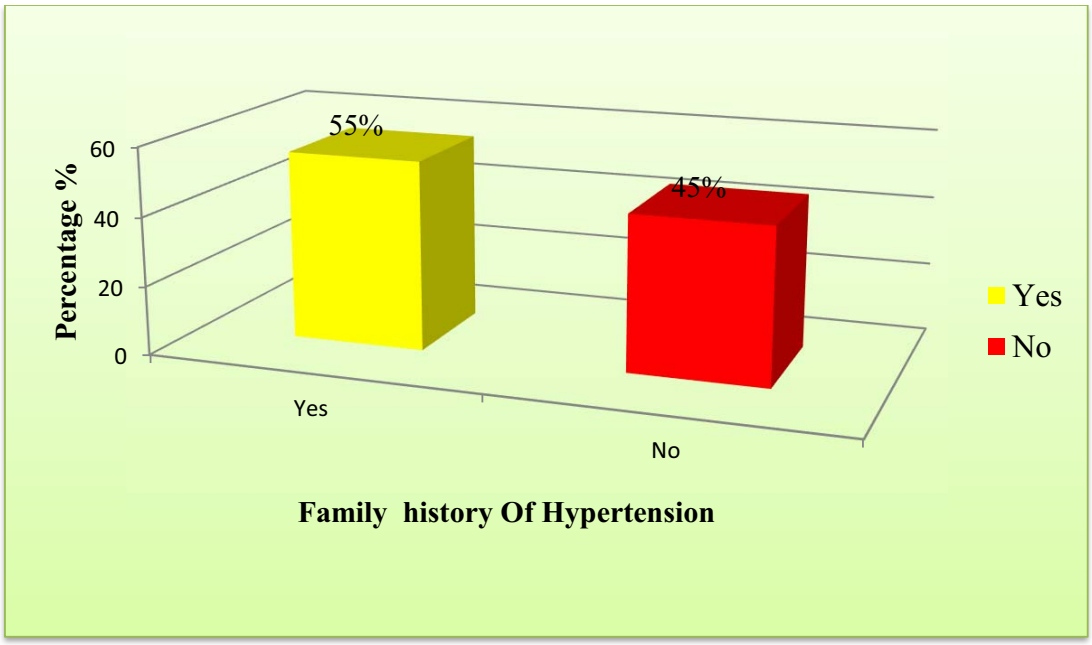


Figure11: Distribution of samples according to their family history of hypertension

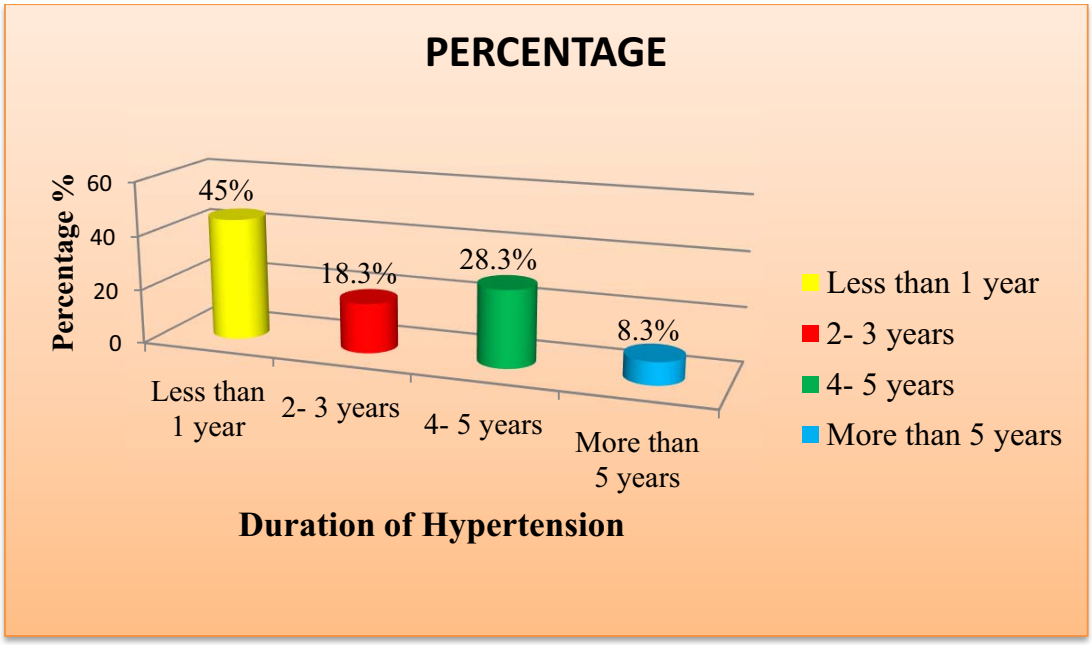


Figure12: Distribution of samples according to their duration of hypertension

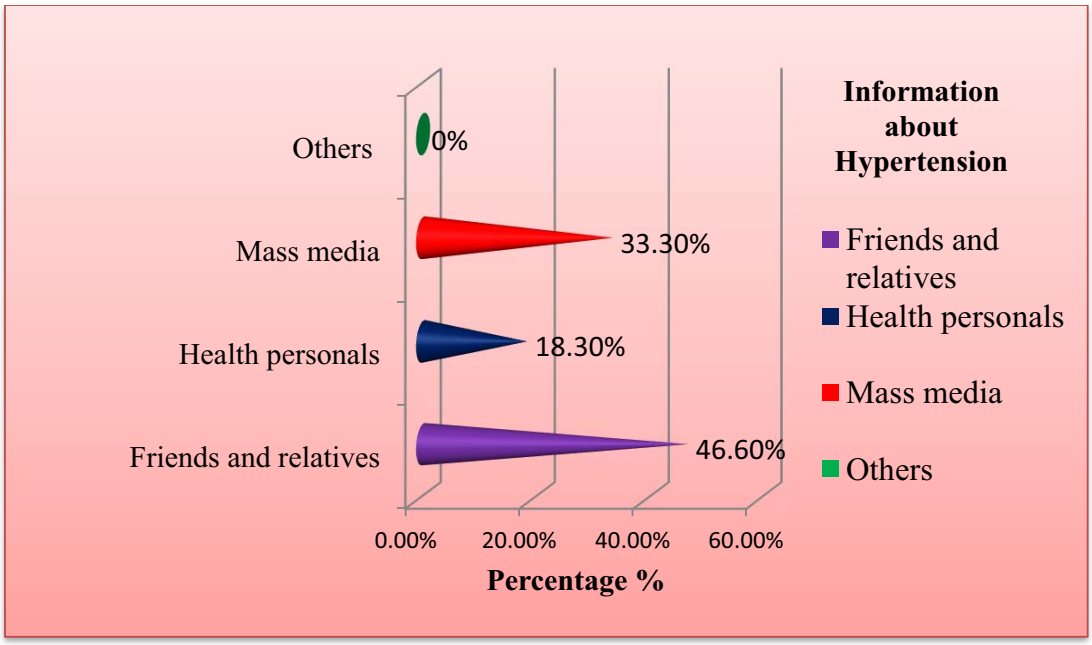


Figure13: Distribution of samples according to their sources of information about hypertension

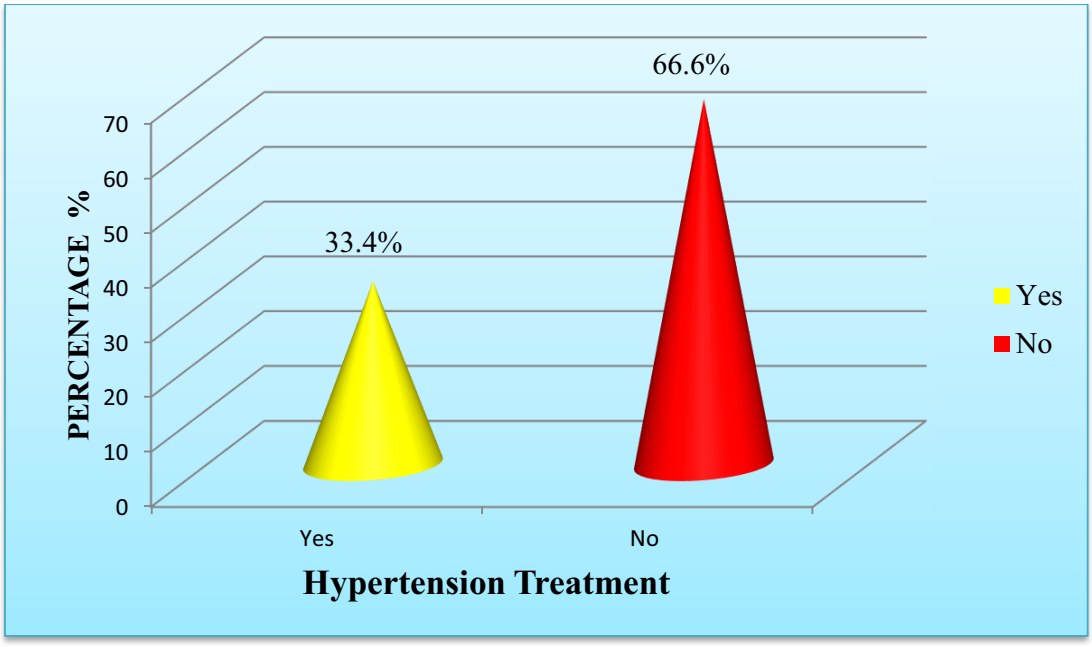


Figure14: Distribution of samples according to their treatment of hypertension

SECTION II

Description of samples according to their pre-test and post-test level of knowledge

Table-3: Description of samples according to their pre-test and post-test level of knowledge

(n=60)

S.No	Level of knowledge	Pre test			Post test		
		F	Mean	%	F	Mean	%
1	**Adequate (**Above 75%)	0	0	0%	51	27	85%
2	**Moderate (**50% – 75%)	4	12.3	6.7%	9	21.1	15%
3	**Inadequate (**Below 50%)	56	11.6	93.3%	0	0	0%

Table 3: depicts that, the pre test and the post test level of knowledge. In the pretest majority 56 (93.3%) of the hypertensive patients had inadequate knowledge level and 4 (6.7%) had moderate level of knowledge. Nobody scored adequate (above 75) marks in pre test. But in the post test, Majority 51 (85%) of the hypertensive patients had adequate knowledge level (above 75) and only 9 (15%) of them scored moderate knowledge level (50-75%). The above findings summarizes that, the self instructional module has significant beneficial effect in the level of knowledge among hypertensive patients.

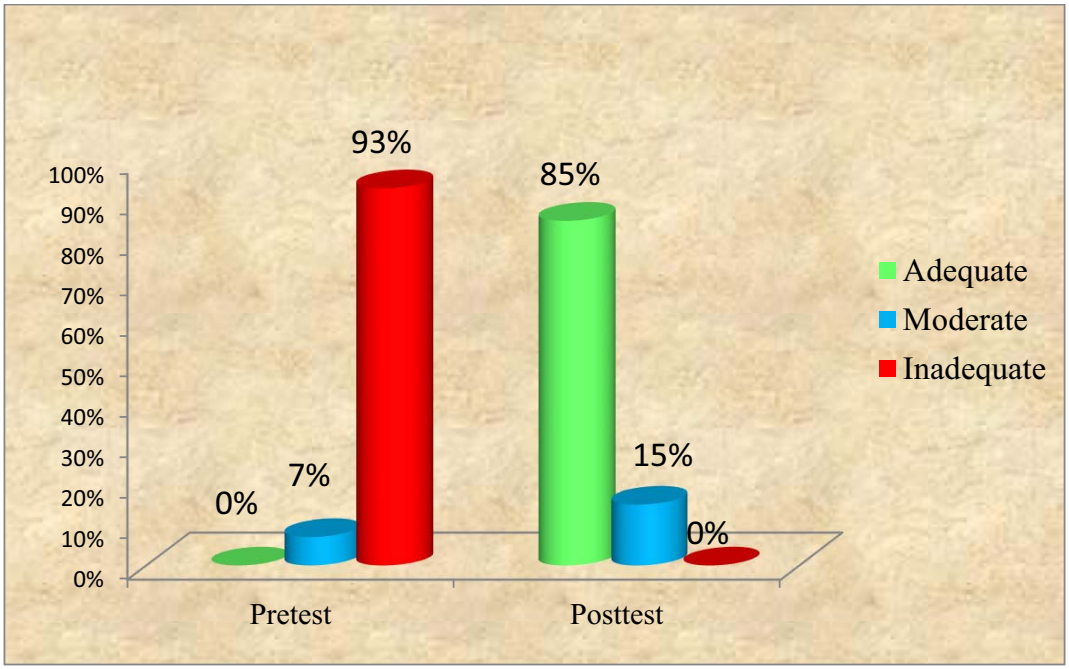


Figure 15: Description of samples according to their pre-test and post-test level of knowledge

SECTION -III

Comparison of mean pre test and post test level of knowledge among the samples.

Table4: Comparison of mean pre test and post test level of knowledge among the samples.

(n=60)

SL.NO	LEVEL OF KNOWLEDGE	MEAN	MEAN DIFFERECE (MD)	STANDARD DEVIATION (SD)	't' VALUE
1	**PRE TST**	11.6	14.48	1.40	33.67**
2	**POST TEST**	26.08			

**Significant at 0.05 level

The above table depicts comparison of mean pre test and post test knowledge level on prevention of stroke among hypertensive patients. The post test mean score (26.08) was high when compared to the pre test man (11.6) score of knowledge. The obtained' value (33.67) was greater than table value at 0.05 level of significance, which shows that there is significant difference between the pre test and post test level of knowledge regarding prevention of stroke among hypertensive patients. Hence, the formulated research **Hypothesis H1 was accepted**

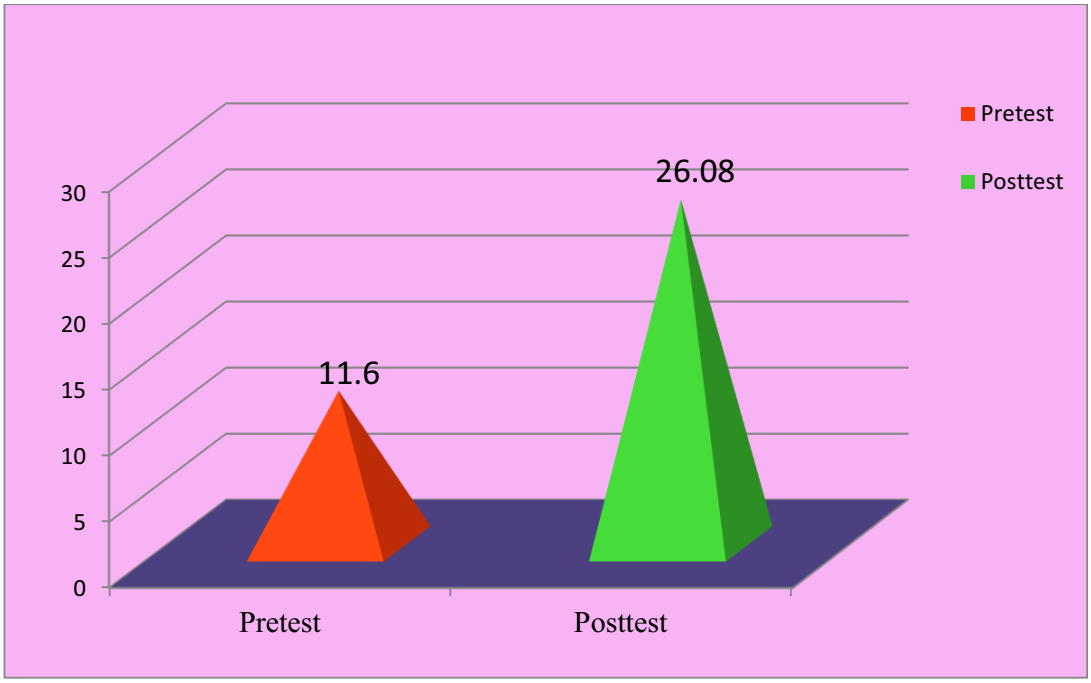


Figure 16: Comparison of mean pretest and post test level of knowledge among the samples.

SECTION IV

Association of pre-test level of knowledge and their selected demographic variables.

Table 5: Association of pre-test level of knowledge and their selected demographic variables.

(n=60)

S.No	Demographic variables	Level of knowledge		$\chi 2$	Table value	Level of significance
		Above mean	Below mean			
1	**Age in years**					
	40-45	06	04	2.03	5.99	(NS)
	46-55	10	17			
	56-65	08	15			
2	**Gender**					
	Male	22	16	0.12	3.84	
	Female	14	08			(NS)
3	**Type of family**					
	Nuclear	22	23	0.08	3.84	(NS)
	Joint	08	07			
4	**Monthly income**					
	3,000-8000/month	14	30	8.5	7.82	(S)
	8,000-14,000/month	03	07			
	14,000-20,000/month	01	04			
	20,000 & above	01	0			

5	**Marital status**					
	Unmarried	02	06	0.11	5.99	(NS)
	Married	16	36			
	Divorced	0	0			
6	**Diet**					
	Vegetarian	03	05	0.08	3.84	(NS)
	Non-vegetarian	17	35			
7	**Occupation**					
	Government job	05	12	2.5	7.82	(NS)
	Private job	02	03			
	Home maker	05	9			
	Retired	04	20			
8	**Education**					
	Illiterate	01	07	0.2	7.84	(NS)
	Primary education	02	13			
	Secondary education	06	25			
	Graduate and above	01	05			
9	**Personal habits**					
	Smoking	02	05	1.63	7.82	(NS)
	Alcoholism	03	10			
	Smoking & alcoholism	03	14			
	No such habits	08	15			
10	**family history of hypertension**	18	15	0.62	3.84	(NS)
	yes	12	15			
	no					

11	**Duration of hypertension** Less than 1 Year 2-3 year 4-5 Year More than 5 years	15 06 10 03	12 05 07 02	0.12	7.82	(NS)
12	**Source of information** Friends and relatives Health personals Mass media Other	09 05 14 0	11 06 15 0	0.18	7.82	(NS)
13	**Hypertension treatment** Yes No	07 18	13 22	0.70	3.84	(NS)

**Significant at 0.05 level

The above table depicts the association of Hypertensive patients level of knowledge on prevention of stroke with their monthly income, the calculated value of chi-square (1.37) was less than the table value at 0.05 level of significance. So there is a significant association exist between the monthly income of Hypertensive patients with their knowledge.

The above table depicts the association of Hypertensive Patients level of knowledge on prevention of stroke with their Age calculated value of chi-square (2.03), Gender calculated value of chi-square (0.12), Type of family calculated value of chi-square (0.08), Marital status calculated value of chi-square (0.11), Diet calculated value of chi-square (0.08), Occupation calculated value of chi-square (2.5), Education calculated value of chi-square (0.2) , Personal habits calculated value of chi-square (1.63), Family history calculated value of chi-square (0.62) , Duration of Hypertension calculated value of chi-square (0.12), Source of information calculated value of chi-square (0.18), Hypertensive treatment calculated value of chi-square (0.70) were less than the table value at 0.05 level of significance. So there was no significant association exist between the demographic variables of Hypertensive patients with their knowledge.

CHAPTER- V

DISCUSSION, SUMMARY, CONCLUSION, IMPLICATION AND RECOMMENDATION

Discussion:

The present study was designed to assess the effectiveness of self instructional module on knowledge regarding the prevention of stroke among hypertensive patients in a selected hospitals Madurai

To find out the effectiveness of self instructional module, the investigator adapted pre –experimental one group pre-test post- test design and 60 hypertensive patient were selected through purposive sampling technique

The first objective was two assess the pretest knowledge regarding prevention of stroke among hypertensive patients

Edomwonyi N.et.al., (2013), performed the cross sectional study to assess the knowledge of hypertension among elder adults (no.366). A pretest was conducted before the lecture and post test conducted afterwards. the mean post test score (9.27) was higher than the mean pre test score (7.81) and the difference was statistically significant with the P<0.0001.this study concluded that teaching improves the knowledge of hypertension.

In this study, hypertensive patients pretest knowledge score regarding prevention of stroke was assessed. Majority of hypertensive patient (93.3%) had inadequate knowledge and (6.7%) had moderate level knowledge. Nobody had adequate knowledge in the pretest.

The second objective was to assess the effectiveness of self instructional module on knowledge regarding prevention of stroke.

Pappu (2013) conducted an evaluvatory study to assess effectiveness of self instructional module on prevention of stroke among hypertensive the patients. research design was pre experimental, with one group pretest and post test design.50 hypertensive patients residing in urban community (Nashik) selected by purposive sampling. semi-

structed questionnaire on prevention stroke was administered before and after the self instructional module.pre test knowledge score was 50.44%.post test score was 92.55%. The obtained **t** value (33.2) was greater than the table value at 0.05 level of significance, which shows there is a significant difference between the pre test and post test level of knowledge regarding prevention of stroke among hypertensive patients.

In this study also, hypertensive patients shown improved knowledge after self instructional module on knowledge regarding prevention of stroke. Majority (85%) of the care givers had adequate knowledge level (above 75) and only (15%) of them scored moderate knowledge level 50-75%). The post test mean score was (26.08) high when compare to pre test mean (11.6) score of knowledge. The obtained **t** value (33.67) was greater than the table value at 0.05 level of significance, which shows there is a significant difference between the pre test and post test level of knowledge regarding prevention of stroke among hypertensive patients. Hence, the formulated research hypothesis **H_1 was accepted.**

The third objective was to find out the association between the pre-test level of knowledge with the selected demographic variables.

The present study reveals that there is a significant association between the pre test score with their selected demographic variables, the chi-square test was computed. With regards to pre test level of knowledge and monthly income, the obtained chi-square value was 8.5 at df (3) was significant at 0.05 level. Hence, the formulated research hypotheses, **H_2 were accepted**. The other demographic variables such as age, sex,type of family, marital status, diet, job, educational status, personal habits, any family history of hypertension, duration of hypertension, sources of information regarding hypertension, hypertensive treatment ,shows no association with knowledge score.

Summary:

The study was concluded to evaluate the effectiveness of Self Instructional Module on knowledge regarding the prevention of stroke among hypertensive patients in a selected hospital at Madurai district.

The Objectives of the study were,

- To assess the level of knowledge regarding prevention of stroke among hypertensive patients.
- To evaluate the effectiveness of self instructional module on knowledge regarding prevention of stroke among hypertensive patients.
- To find out the association between the pretest level of knowledge with their selected demographic variables

The Hypotheses of the study were,

- **H_1:** Hypertensive patients will show significant difference between pretest and posttest level of knowledge regarding self instructional module on prevention of stroke.
- **H_2:** Hypertensive patients will show significant association between pretest level of knowledge with their selected demographic variables.

The first hypotheses shows significant difference between pretest and posttest level of knowledge regarding self instructional module on prevention of stroke

In the pretest majority (93%) of the hypertensive patients had inadequate knowledge level and (7%) had moderate level of knowledge. Nobody scored adequate scored adequate (above 75) marks in pre test. But in the post test, Majority (85%) of the hypertensive patients had adequate knowledge level (above 75) and only (15%) of them scored moderate knowledge level (50-75%). The findings summarizes that, the self instructional module has significant beneficial effect in the level of knowledge among hypertensive patients. The post test mean score was (26.08) high when compared to pre test mean (11.6) score of knowledge. The obtained t value (33.67) was greater than the table value at 0.05 level of significance, which shows there is a significant difference between the pre test and post test level of knowledge regarding prevention of stroke

among hypertensive patients. Hence, the formulated research hypothesis **$H_1$was accepted.**

The second hypotheses shows significant association between pretest knowledge level with their selected demographic variables.

The present study reveals that there is a significant association between the pre test score with their selected demographic variables, the chi-square test was computed. With regards to pre test knowledge level and monthly income, the obtained chi-square value was 8.5 at df (3) was significant at 0.05 level. Hence, the formulated research hypotheses, **H_2 were accepted**.

The study tested and proved the **hypotheses. H_1** that there is a significant improvement in the pre test and post test level of knowledge for hypertensive patients receives self instructional module. **H_2** that there is a significant relationship that exists between the level of knowledge on prevention of stroke among hypertensive patients.

The study was based on general system theory by Ludwig Von Bertanlanffy (1968), an Evaluatory approach used to conduct the study. The research design adopted for the present study was pre-experimental in nature. Purposive random sampling technique was used for selection of samples. The data was collected for the period of 4 weeks from the hypertensive patients in selected hospitals at Madurai. The investigator rendered given self instructional module on prevention of stroke. Then they were assessed to test knowledge after a week with the semi- structured questionnaire. Based on the objectives and hypotheses, the data were analyzed using both descriptive and inferential statistics.

Major findings of the study:

Pham TM et al., (2010) had Conducted in Fukuoka prefecture, Japan with a total of 9,651 subject aged 40 or over and free of Stroke were analyzed. The aim of the study is to estimate stroke mortality and evaluate risk factor for total stroke and its two principle

subtypes in a cohort Study in Japan. Mortality rate per 1, 00,000 person- year of stroke was estimated. The Cox proportional hazard ratios and 95% confidence interval. A total of 226 Stroke deaths were recorded due to hypertension. Among these, stroke mortality rates were 209.4 per 100,000 person-years in males and 140.5 in females. The study concluded that advanced age, male gender, history of hypertension were associated with an increased risk of total stroke mortality.

In this study,

- Demographic characteristics of hypertensive patients among 60,with regards10 (16.7 %) were 40 to 45 years of age,27 (45%) were having 46to 55 years of age and 23 samples (38.3%) were 56 to 65 years of age
- In case of sex, majority of the hypertensive patient 38 (63.3%) were male and 22 female was (36.7%).
- Findings related to types of family 45 (75%) were comes under nuclear family and 15 (25%) were comes under join family.
- Regarding family monthly income 44 (73.3%) were earning rupees 3000 to 8000, 10 (16.7%) were earning rupees 8001 to 14000, 5 (8.3%) were earning 14001 to 20000 and 1 (1.7%) were earning rupees above 20001.
- Regarding marital status 52 (86.7%) were married, 8 (13.3%) were unmarried and 0 (0%) were divorced.
- Regarding food habits,8 (13.3%) were vegetarian and 52 (86.7%) were non vegetarian
- Regarding occupation, 17 (28.3%) were government job, 5 (8.3%) were private job, 14 (23.4%) were home maker and 24 (40%) were retired.
- Regarding education, 8 (13.3%) were illiterate, 15 (25%) were primary education, 31 (51.7%) were secondary education, 6 (10%) were graduate and above.
- Regarding personal habits 7 (11.7%) were smoking, 13 (21.7%) were alcoholism, 17 (28.3%) were smoking and 23 (38.3%) were no such habits.
- Regarding any family history of hypertension, 33 (55%) were having hypertension and 27 (45%) were not having hypertension.

- Regarding duration of hypertension, 27 (45%) were diagnosed less than one year, 11 (18.4%) were diagnosed 2 to 3 years, 17 (28.3%) were diagnosed 4 to 5 years and 5 (8.3%) were more than 5 years.
- Regarding source of information about hypertension, 20 (38.3%)were friends and relatives,11 (18.4%) were health personals , 29 (48.3%) were mass media and 0(0%) were from others
- Regarding treatment, 20 (33.3%) were taking treatment and 40 (66.4%) were not taking treatment regularly.
- Hypertensive patients-In pretest majority 56 (93%) of the hypertensive patients had inadequate knowledge level and 4 (7%) had moderate level of knowledge. Nobody scored adequate scored adequate (above 75) marks in pre test. But in the post test, Majority 51 (85%) of the hypertensive patients had adequate knowledge level (above 75) and only 9 (15%) of them scored moderate knowledge level (50-75%). The findings summarizes that, the self instructional module has significant beneficial effect in the level of knowledge among hypertensive patients. The post test mean score was (26.08) high when compared to pre test mean (11.6) score of knowledge. The obtained t value (33.67) was greater than the table value at 0.05 level of significance, which shows there is a significant difference between the pre test and post test level of knowledge regarding prevention of stroke among hypertensive patients. Hence, the formulated research hypothesis **$H_1$was accepted.**
- The present study reveals that there is a significant association between the pre test score with their selected demographic variables, the chi-square test was computed. With regards to pre test knowledge level and monthly income, the obtained chi-square value was 8.5 at df (3) was significant at 0.05 level. Hence, the formulated research hypotheses, **H2 were accepted**. The other demographic variables such as age, sex,type of family,marital status, diet, job, educational status, personal habits, any family history of hypertension, duration of hypertension, sources of information regarding hypertension, hypertensive treatment ,shows no association with knowledge score.

Conclusion:

The study finding provide the statistical evidence that clearly indicates that self instructional module has significant effect on the level of knowledge of hypertensive patients.

Implication:

Nurses can use the self instructional module as a best teaching method for impacting the knowledge in the field of health. The presents study has several implications in Nursing practice, Nursing administration and Nursing research.

Nursing practice:

- ✓ Nursing professional working in the hospital as well as in the community can understand the importance of health education regarding the prevention of stroke.
- ✓ Community nurses play a key role in changing the health behavior of people towards hypertension and thereby improve success rate in early case identification and its treatment.
- ✓ The study reveals the need for knowledge enhancement as again ongoing process.
- ✓ Public awareness is an important factor for achieving health and practing healthy life style. This study reveals the importance of giving health education and community participation to develop a healthy community.
- ✓ Lectures, discussions, training, workshop, seminars can be conducted on prevention of stroke to improve the knowledge of the hypertensive patients.
- ✓ Nationwide network can be organized to share the knowledge as well as the incidence about stroke.

Nursing Education:

- ✓ Self instructional module can be used by the student to imparting knowledge on prevention of stroke among hypertension patients in both urban and rural while giving health education.
- ✓ Nurse educator can prepare the nursing students in order to give importance of teaching programme on prevention of stroke among hypertensive patients by using different educational and teaching aids.

Nursing research:

- ✓ The findings of the present study are helpful for the nursing professionals and nursing teachers to conduct further studies to find out the effectiveness of various methods of providing education on improving the knowledge regarding prevention of stroke among hypertensive patients for various demographic variables.

Nursing administration:

- ✓ Nurse administrator should take interest in motivating the nursing personnel to improve their professional knowledge, skill by attending the workshops, conference, and seminars on prevention of stroke.
- ✓ Nurse administrator should arrange regular in-service education program to the health care worker gaining knowledge.

Recommendations

On the basis of finding of the study following recommendations have been made:

- ✓ A similar study can be replicated on the large sample to generate the findings
- ✓ A similar study can be replicated on the sample with demographic characteristics
- ✓ A similar study can be conducted among different other professionals who belongs to the risk age groups
- ✓ An observational study can be conducted among the hypertensive patients in rural community to assess their preventive practices the hemorrhagic stroke.

LIST OF REFERENCES

1. Ariesen MJ, Claus SP, rinkel GJ, Algra A.,(2003),Risk factors for intracerebral hemorrhage in the general population: a systematic review , Aug 3 4 (8) 2060-5.
2. Amanullah, Nazir shah, shams-ur –rehman, Salma Ataullah., (2009), Frequency of cerebral infarction and hemorrhage in the patients of stroke. J Ayyb Med coll Abbottbad 21(4). Available from URL:http://www.ayubmed.edu.pk/jamc/past/21-4/Amanullah.pdf.
3. Anderson CS,huang Y, Wang JG, arima h, neal b, pang b, heeley E, Skulina C. et al.,(2008), intension blood pressure reduction in acute cerebral hemorrhage trial (INTERACT): a randomized pilot trial. Lancet Neurol. may; 7(5):391-9. Doi: 10.1016/S1474-4422(88)70069-3.EpubApr7.availablefrom URL:http://ncbi.nih.gov/pubmed /18396107.
4. Alla-ud-Din Abro, Muhammad Aslam Abbasi, Hfeezullah, Jawaid sammo, Muzafar Sheikh., (2007), Incidence of stroke in context of hypertension in local population. Pak JPhysiol 3(2).Availablefrom: URL:http://www.pps.org.pk /PJP/3-2/08-allouuddin.pdf.
5. Azra Zafar, Frrukh Shoheb khan. (2008),Clinical and radiological features of intracerebral hemorrhage in hypertensive. Journals of Pakistan medical association.July.Availablefrom URL:http://www.jpma.org.pk/full_article_text.php?article_id=1433.
6. Back Ct, Polit DF. (2004) Nursing Research: Principles and Methods.7th ed. Philadelphia, Lippincott Williams & Wilkins.
7. Bansal K.Sushil, saxena Vartika, Kandpal Sunil D, Gray William K, Walke Richard W, Goel Deepak,et al.,(2012),The prevalence of hypertension and hypertension risk factors in a rural Indian community. A prospective door-to-door. Journal of cardiovascular disease research, vol 3 (3) 117-123.
8. Basanth M., (2007), Effectiveness of planed teaching programme on rehabilitation, of cancer breast patients after mastectomy in terms of knowledge and expressed practices of nusing personnel. Nursing journal of India, XCVIII (12):12-15.

9. Bestehorn K, K Wahle, W Kirch., (2008), Stroke risk screening of adults with hypertension: prospective cross-sectional study in primary care. Clin Drug Investing, 28(5) 281-9.
10. Bharathi R., (2005), Effectivess of planned teaching programme on selected aspects of adolescent reproductive health among female students. Times of India, XXIII (II), 26-29.
11. Bhat AR, M Asfzalwani, AR Kirmani., (2011), Subarachnoid hemorrhage in Kashmir. Causes, risk factors, and outcomes. Asian J Neurosurgery, Jul 6 (2)57-71.
12. Boulanger JM, DG Hackam, NA Khan, BR Hemmelgarm, SW Rabikin.,(2010),The Canadian Hypertension Education program recommendations for the management of hypertension: part1- theory., May 26 (5)249-4
13. Braun AK., (2008), a structured treatment and teaching programme for older patients with diabetes mellitus- a prospective randomized controlled multi center trial. Oxford Journals mar 27; 38(4): 390-96.
14. Burns N, grove KS (1999) "understanding nursing Research. 2th edition. Philadelphia. Harcourt Pvt Ltd;
15. Bytche KS, jeerakathil T,Hill M,Demehuk AM,dowlatshahi D,Coutts SB,et al.,(2013), the intracerebral Hemorrhage acutely Decreasing ArterialPressureTrial.Stroke.mar;44(3):620.Doi:10.1161/STROKEAHA. 111.000188.epub,feb7.AvailablefromURL:http//www.ncbi.nim.nih.gov/pubmed/23391776
16. Canadian Women's Health Network. 2012 Available from URL: http://www.cwhn.ca/en/node/39392
17. Chiquete E, Ochoa-Guzman A, vargas-Sanchez p, Ruiz-Sandoval JL., (2013), Blood pressure at hospital admission and outcome after primary intracerebral hemorrhage. Arch Med Sci. Feb21; 9(1):34-9. Available from URL: http://www.ncbi.nlm.nih.gov/pubmed/23515573
18. Choi CU, Parks (2009), Estimating the probability of stroke in Korean hypertensive patients visiting tertiary hospitals using a risk profile from the Framingham study. BMC Neural, Apr 22 916

19. Darly Krishnamurthy.,(2008),A study to evaluate the effectiveness of STP on knowledge of reproductive and child health services and its utilizations among mothers of under five children, in begur PHC, Bangalore south, University of RGUHS.
20. Donnell Mrtin J O', Xavier Dennis, Prof Liu Lisheng, Prof Zhang Hongye, Chin Siu Lim, Melacini Purnima Rao-et al., (2010), risks factors for ischemic and intracerebral hemorrhagic stroke in 322 countries (the interstroke Study): a case-control study. The lancet .376(9735) 112-123.
21. Ebrahim shah, song joohon sun yun-, ferrer Robert L, Laelo Debbie A, smith George davey, et al., (2006), serum cholesterol, hemorrhagic stroke, ischemic stroke, and myocardial infarction: koream national health system prospective cohort study. BMJ. jul 1333 (7557) 22.
22. Feigin VL, GJ Rinkel, Cm Lawes, A Algera, DA Bennett, Da Van Gijin Da, Ca Anderson.,(2005), Risk factors for Subarachnoid hemorrhage: An Updated Systematic of Epidemiological Studies. Stroke ,Dec 3 5(12) 2773-80
23. Feigin V, V Parag, CM Lawes, A Rodgers, I Suh, M Woodward, K Jamrozik, H sUeshima et al., (2005), Asia Pacific Cohort studies collaboration. Smoking and elevated blood pressure are the most important risk factors for subarachnoid hemorrhage in the in the Asia-Pacific region: an overview of 26 cohort involving 306,620 participants. , Jul 36 (7) 1360-5.
24. Flaherty ML, D Woo, M HaverBusch, P Sekar , J Khoury, L Sauerbeck, CJ Moomaw, A Schneider, B Kissela, D Kleindofer, JB Broderick,et al.,(2005), Racial variations in location and risk of intracerebral hemorrhage, May 36 (5) 934-7.
25. Group. Randomized trial of a perindopril-based blood-pressure-lowering regimen among 6,105 individuals with previous stroke or transient ischemic attack, Lancet 2001, sep 29 358 (9287) 103341.
26. Goldstein LB, P Amarenco, M Szarek, A Callahan 3rd, M Hennerici, H Sillesen, JA Zivin, KM Welch et al.,(2008), Hemorrhagic stroke in the stroke prevention by aggressive reduction in Cholestol Levels study. Neurology. jun 10 70 (24) 2364-70.
27. "Hyperetesion",AvailablefromURL:http://emedicine.medscape.com/article/241381-overview

28. Hypertension in India. (2012), CADI Research Foundation. Availablefrom: URL://www.cadiresearch.org/topic/hypertension/hypertension-india
29. Huriletemuer, Chunyu Zhang, Gunangming Niu, Shingang Zhao, Hurile Hurile.,(2010), Gene polymorphisms and related risk factors in Monogolian hypertensive stroke patients 185 Neurosciences Vol. 15(3)
30. "Introduction to The Brain: Our sense of self" Available from URL: http://science.education.nih.gov/supplements/nih4/self/guide/introduction.html
31. Jing Zhang, Yao Wang, Gan-nan wang, Hao Sun,Tao Sun, Jian-quan Shi,et al.,(2011) Clinical Factors in patients with ischemic versus hemorrhage stroke in East China. World J Emerg Med, Vol 2, No 1.
32. Joerg Kupft, Uwe Gieler, Thamas L Diepgeen, manige Fartasch, Thamas Lob-Conrzilius, Johannes Ring, Sibylle Scheewe, et.al.,(2003), Structred education program improves the coping with atopic dermatitis in children and their parents-a multicenter, randomized controlled tria. Journal of Psychosomatic Research, 68(4): 353-358.
33. Jose Vega M.D., (2008), "Interesting Facts and statistics About stroke". september2.,Availablefrom URL:http://stroke.about.com/od/strokestatistics/a/StrokeStats.html
34. Joytsna singh (2012), India has rates of hypertension, reveals Who study.Deccanherald.May-16.Availablefrom URL: http://www.deccanherald.com/content/250115/india-has-low-rates-hypertension.html#top.]
35. Kanji S, C Corman, AG Douen., (2002), Blood pressure management in acute stroke: comparison of neurological guidelines with prescribing patterns. The Canadian journal of neurological sciences. May 29(2) 125-31.
36. Kapil saini (2011), "Importance of good health". Preserve articles. jul 30. Available from URL: http://www.preservearticles.com/.../short-essay-on-the-importance-of-good heath
37. Kazuhiro Ohwaki,MD,Eiji yano, MD,Hiroshi Nagashima, MD, Masafumi Hirata, MD,et al., Blood Pressure Management in Acute Intracerebral Hemorrhage,

Relationship Between Elevated Blood Pressure and Hematoma Enlargement. Available from URL: http://stroke.ahajournal.org/content/35/6/1364.full

38. Kelias P,Msyamboza' Damson Kahyola Titha Dzowela, cemeron Bowie'. The burden of hypertension and its risk factors in Malawi: nationwide population- based STPS survey.Volum4, issue4pp.246-252.Avaliblefrom URL:http//inthealth.oxfordjounals.org/content/4/4/246.abstract.
39. Khealani BA, Syed NA, Maken S, Mapari UU, Hameed B,Ali S, Qureshi R, Akhater N, Hassan A,sonawalla AB,Baig SM,Wasay M. Predictors of ischemic versus hemorrhage strokes in hypertensive patients.
40. Liu-Deryke X, Levy PD, Parker D Jr, Coplin W, Rhoney DH.,(20I3), A prospective Evaluation of Labetalol Versus Nicardipine for Blood Pressure management in patients with Acute Stroke. Neurocrit Care. jun 13.
41. Lund heheim L,holme I,Hjermann I, Tonstad S., (2006), Risk-factor profile for the incidence of subarachnoid and intracerebral hemorrhage, cerebral infarction, and unspecified stroke during 21 years' follow-up in men. Scand J Public Health. 34(6):589-97. Available from URL:http://www.ncbi.nlh.gov/pubmed/17132592.
42. Maitlo, Hussain Bux; Shaikh, Tariq Zaffar; Shaikh, abdul Halcem; Ghori, rafi Ahmed; Khan, Mashood A., (2010), Frequency of hemorrhage or infarction in hypertensive stroke patient. Medical Channel; Oct, vol.16issue4, p506.Avaliblefrom URL:http//connection.ebscohost.com/c/articles/69714328/frequency-hemorrhage-infarction-hypertensive-stroke-patients.
43. Mancia G. Ambrosioni E, Rosei EA Leonetti G, Trimarco B, Volpe M,et al.,(2005), Blood pressure control and risk of stroke in untreated and treated hypertensive patients screened from clinical practice: results of the For life study. J Hypertens, Agu 23(8) 1575-81 Available from URL: http://www.ncbi.nil.nih.gov/pubmed/16003185.
44. Mesah GA.,(2008), Epidemiology of stroke and high blood pressure in Africa.Heart94:697to70
    AvailablefromURL: http://heart.bmj.com/content/94/6/697.absrtact.
45. Mona Kravirz., (1979), General Systems Theory Applied to Nursing. Can Med Assoc December 8; 121(11): 1496

46. Ohkubo T, Asayama K, Kilkuya m, Metoki H, Obara T et al. prediction of ischemic and hemorrhage stroke by self-measured blood pressure at home: The Ohasama study. Blood pressure monit.20041 Dec;9(6):315-20.Availablefrom URL: http://www.ncbi.nlm.nih.gov/pubmed/15564987

47. peter Gaede, pernille VeDel, Nicolai Larsen, Gunnar V, H Jensen, Hans-henrik parving (2003), Oluf Pedersen. Multfactorial intervention and cardiovascular disease in patients with Type 2 Diabetes. New England Journal of Medicine, January 348(4):383-393.

48. polite F.denise, Cheryl tatano Beck., (2007),"Nursing Research: principles and methods". 7th end. Philadelphia, Lippincott Williams &Wilkins. P.G.NO:87-90.

49. Peltzer k, Phaswana-Manfoya N., (2013), Hypertension and associated factors in older adults in south Africa. Cardiovass J Air. Apr; 24(3): 67-72.

50. Qureshi AI, Mohammed Y, Suri MF, Braimah J, Janardhan V, Guterman LR, hospking LN, Frankel MR.,(2001), Cocaine use and hypertension are major risk factor intraerebral hemorrhage in young African Americans.EthnDis.Spring-Summer:11(2(:311-9.Availablefrom URL:http://www.ncbi.nlm.nih.gov/pubmed/11456006?dopt=Abstract&holding=f1000,f1000m,isrctn.

51. Rodriguez-Luna d, Pinerio M, coscojuela P, Pagola J et al., (2013), Impact of blood pressure changes and course on hematoma growth in acute intracerebral hemorrhage. EurJNeurol.May.AvailablefromURL:http://www.ncbi.nlm.nih.gov/pubmed/13647568 .

52. Schacher C, Dhein Y, Munks-Lederer C, Vollmer T, Worth H, Mediznische klinik I, KlinikumFurth. (2006), Evaluation of a structured outpatient education programme for adult asthmatics. New England Journal of Medicine; March 24 (12) 606-610.

53. Schoenstadt (2013),"Effects of high blood pressure". July 04.

54. SeshadriS, A Beiser, M Kelly-Hayes. CS Kase, R Au, WB Kannel, PA Wolf et al.,(2006) The lifetime risk of stroke: estimates from the Framingham study., Feb 37 (2) 345-50.

55. Spyrison Rodits, Nicolai Ianovici. Hemorrhagic stroke in young people Romania.
56. Strazullo, LD'Elia, G Cairella, F Garbagnati, FP Cappuccio, L Scalfi., (2010), Excess body weight and incidence of stroke: meta- analysis of prospective studies with 2 million participant's stroke, May 41(5)418-26.
57. Stroke.June-2011.AvailablefromURL: http://www.apolloneurosciences.com/constent/stroke.html
58. Stroke available from :URL:http://en.wikipedia.org/wiki/stroke
59. Szana fiore Scain, Rogrio Friedma, Jorge Luiz Gross., (2009), A Structured Educational program improves metabolic Control in Patients With Type 2 diabetes. Sage Journals 35 (4) 603-611.
60. Tapas kumar banejee, Shyamal Kumar DAS DM., (2006), Epidemiology of stroke in India Neurology Asia 11:1-4. Available from URL: http://www.neurologyasia.org/artticles/20061_001.pdf
61. Vinay Kumari, Meena Aggarwal, Achal Srinivasa., (2012), A Retrospective Study to Identify Triggers or Precipitators Related to the Onset of stroke. Nursing and Midwifery Research Journal, vol-8, No.2, april.AvailablefromURL: http://medind.nic.in/nad/t12/i2/nadt12i2p141.pdf
62. Volpe Massimo, Rosei Enrico Angabiti, Ambrosioni Ettro, Leonetti Gastone, Trimarco Buno, Manica Giuseppe,et al.,(2007), Reduction in estimated stroke risk associated with practice-based stroke-risk assessment and awareness in a large, representative population of hypertensive patients: Result from the for life study in Italy Hyper Tens, Dec 25 (12) 2390-7
63. "Whatishighbloodpressure"NationalHeart,LungandBloodinstituate.,(2012).Availablef rom:URL:http://www.nhlbi.nih.gov/health/health-topics/topics/hbp/
64. World Health Organization.,(2012), new data highlight increases in hypertension,DiabetesIncidence.Dec.Availablefrom: URL://www.who.int/mediacentre/news/release/2012/world_health_statistics_20120516/en/index.html
65. Woo D, M Haverbusch, P Sekar, B Kissela, J Khoury, A Schneider et al. (2004), Effect of untreated hypertension on hemorrhagic stroke, jul 35 (7)1703-8.

66. “WorldHealthreport’’. (2002),feb-13,2013. AvailablefromURL:http://bwambohealth.blogspot.in/2013/02/stroke-overview.html
67. Worldstrokeday. Available from: URL http://en.wikipedia.org/wiki/world_stroke_day
68. Yangawa Y, sakamoto T, okada Y.unno Y.tokumaru A, Tsushima Y., (2001), Relationship asymptomatic minute hemorrhages in hypertensive patients. Neyrolmedchir2001, Vol-41:no.1; page: 13-18, Availablefrom url:http//sciencelinke.jp/j-eass/artic/200205/00002002.
69. Yingyot Khawnate, nipat Kittimonon, praoaporn. Orathai Tangvarasittichai, surapon Tangvarasittichai. (2012), Blood pressure and metabolic status in Hypertensive patients Subsequent to stroke Onset. Asia Journal of publicHealth, August, Vol.3 No 2. Available from URL:http//www.asiaph:org/admin/imgtopic/48064Supen. puff
70. Zafar Syed Nabeel, Growani Saqib Ali, Irani Faria Amber, Ishaq Mohammad, et al.,(2008), Awareness of the risk factors presenting features and complication of hypertension amongst hypertensives and normontensives. Journal of Pakistan medical association, Dec 5, 8 (12) 711/5.

APPENDIX- I

SELF ADMINISTERED STRUCTURED KNOWLEDGE QUESTIONAIRE

ON PREVENTION OF STROKE AMONG HYPERTENSIVE PATIENTS

Dear participants,

You are requested to read the questions carefully and encircle the correct response.

SECTION-A: DEMOGRAPHIC DATA

Sample No:

1. Age in years
    a) 40-45
    b) 46-55
    c) 56-65

2. Gender
    a) Male
    b) Female

3. Type of family
    a) Nuclear
    b) Joint

4. Monthly income of the family in rupees
    a) 3000-8000/month
    b) 8001-14,000/month
    c) 14,001-20,000/month
    d) 20,001 & above

5. Marital status
    a) Single
    b) Married
    c) Divorced

6. Diet
    a) Vegetarian
    b) Non-vegetarian

7. Occupation
    a) Government job
    b) Private job
    c) Home maker
    d) Retired

8. Education
    a) Illiterate
    b) Primary education
    c) Secondary education
    d) Graduate and above

9. Personal habits
    a) Smoking
    b) Alcoholism
    c) Smoking & alcoholism
    d) No such habits

10. Any family history of hypertension
    a) Yes
    b) No

11. How long have you been diagnosed as hypertensive?
    a) Less than 1 year
    b) 2- 3 years
    c) 4- 5 years
    d) More than 5 years

12. What is the source of information regarding hypertension?
    a) Friends and relatives
    b) Health personals
    c) Mass media
    d) Others

13. Are you taking hypertensive treatment regularly?
    a) Yes
    b) No

SECTION-B:

PART-I: GENERAL INFORMATION REGARDING HYPERTENSION

Dear participants,

You are requested to read the questions carefully and encircle the correct response.

1) What is the main function of brain?
    a) breathing
    b) purifying the blood
    c) Eliminate waste
    d) Controls body activities

2) What is the main function of heart?
    a) Digestion
    b) Circulation
    c) Movement
    d) Respiration

3) In normal adults heart beats per minute
    a) 70- 80 beats/min
    b) 50- 70 beats/min
    c) 40- 60 beats/min
    d) >100 beats/min

4) What is blood pressure?
    a) Increased blood flow into the heart
    b) Increased blood flow from the heart
    c) Force of blood pushing against blood vessels walls
    d) Increased pressure in the organs due to blood

5) The blood pressure is measured by

    a) Thermometer
    b) Ultrasound
    c) Glucometer
    d) Sphygmomanometer

6) The normal blood pressure of an adult is
    a) 170/110 mm of hg
    b) 120/80 mm of hg
    c) 90/50 mm of hg
    d) 140/100 mm of hg

7) Which of the following is cause of hypertension?
    a) Contaminated food and water, alcoholism, smoking
    b) Excessive salt intake, alcoholism, smoking
    c) Nutritional deficiency, excessive salt intake, alcoholism
    d) Excessive salt intake, contaminated food and water, alcoholism

8) Which of the following disease is known as a silent killer?

    a) Hypertension
    b) Tuberculosis
    c) Asthma
    d) Peptic ulcer

9) Hypertension means

a) Increase in cholesterol level
b) Increase in insulin level
c) Increase in blood sugar level
d) Increase in blood pressure level

10) Why increased blood pressure is considered dangerous?

a) Arterial walls can enlarge
b) It reduces the blood amount
c) It increases the work load of heart
d) Increase rate of blood flow

11) The common symptoms of hypertension are

a) Headache, dizziness, and blurred vision
b) Headache, nausea, and vomiting
c) Diarrhea, nausea and dizziness
d) Nausea, diarrhea, headache

12) Which are the main organs affected by hypertension?

a) Heart, lungs, and brain
b) Heart, liver and lungs
c) Heart, lungs and intestine
d) Heart, brain and kidney

13) Hypertension measurement is

a) <90/60 mm of hg
b) >140/90 mm of hg
c) 120/80 mm of hg
d) 100/70 mm of hg

14) Which disease caused by hypertension in the brain?

a) Stroke
b) Cancer
c) Meningitis
d) Brain fever

PART-II: QUESTIONS RELATED TO STROKE

15) Stroke means
   a) Sudden loss of kidney function
   b) Sudden loss of heart function
   c) Sudden loss of brain function
   d) Sudden loss of liver function

16) Which is the second most leading cause of death?
   a) Stroke
   b) Cancer
   c) Ischemic heart disease
   d) Anemia

17) What happens in a stroke?
   a) Interruption of urine flow
   b) Interruption of CSF flow
   c) Interruption of lymph flow
   d) Interruption of blood flow

18) What are the main symptoms of stroke?
   a) Face drooping, arm weakness and speech difficulty
   b) Diarrhea, nausea and face drooping
   c) Vomiting, breathing difficulty and convulsion
   d) Breathing difficulty, convulsion and breathing difficulty

19) How hypertension produce stroke?
   a) It strains, weakens and damages the blood vessels
   b) It relaxes the blood vessels
   c) It increases the cholesterol level
   d) It increases the hemoglobin level in the blood

20) What are the main symptoms of stroke?
   a) Headache, nausea and vomiting
   b) Fever, nausea and vomiting
   c) Diarrhea, fever and vomiting
   d) Coma, headache and seizure

PART-III: PEVENTION OF STROKE AMONG HYPERTENSIVE PATIENT

21) How can you prevent the stroke for the hypertensive patients?
   a) Increase the body weight
   b) Control the high blood pressure
   c) Drink plenty of coffee
   d) Inadequate sleep

22) Which is the diet most suitable for hypertensive clients?
   a) Low salt, low fat, low carbohydrate
   b) Low salt, high fat, high protein
   c) High salt, high fat, low protein
   d) High salt, low fat, low protein

23) How many glasses of water a person must drink per day?
   a) At least 6 glasses
   b) At least 10 glasses
   c) At least 8 glasses
   d) Al least 12 glasses

24) The daily recommended minutes of exercise to lower blood pressure is
   a) 30- 45 minutes
   b) 10- 25 minutes
   c) 20- 35 minutes
   d) 60- 75 minutes

25) What is the effect of smoking on blood vessels?
   a) Decrease blood supply to heart
   b) The heart rate
   c) Decrease the oxygen supply to heart
   d) Narrows the lumen of blood vessels

26) Which among the following is the important way for stress management?
   a) Reduce sleep
   b) Listen to music
   c) Healthy diet
   d) Proper rest

27) A measure to reduce weight
    a) Drink plenty of fluids
    b) Proper rest and sleep
    c) Physical activity
    d) Don't take food

28) How many hours a person must sleep in a day?
    a) 12 hours
    b) 8 hours
    c) 10 hours
    d) 6 hours

29) Regular blood pressure monitoring is done to
    a) Detect the early symptoms of complications
    b) Find out the cause of disease
    c) Do the laboratory tests
    d) Start the medication

29) How can you maintain a normal blood pressure?
    a) Take medication in alternative days
    b) Taking medication without consultation
    c) Taking prescribed medication
    d) Take medicine whenever you get time

30) How can we treat high blood pressure?
    a) High fat diet, inadequate sleep, exercise
    b) Decreased food intake, exercise, proper medication
    c) Decreased intake of water, high salt consumption, proper medication
    d) Low salt consumption, exercise, proper medication

ANSWER KEY

Answers for the above semi-structured questionnaire

Q.NO	ANSWER
1	D
2	B
3	A
4	C
5	D
6	B
7	B
8	A
9	D
10	C
11	A
12	A
13	B
14	A
15	C
16	A
17	C
18	A
19	A
20	D
21	B
22	A
23	C
24	A
25	D
26	B
27	C
28	B
29	C
30	D

APPENDIX- II

cah; ,uj;j mOj;jk;

kw;Wk; mjdhy; cUthFk; gf;fthjk; tuhky; jLg;gjw;fhd tpopg;Gzh;T kjpg;gPl;L gbtk;

gq;fspg;gth;fspd; ftdj;jpw;F>

fPo;fz;lthW tpdhf;fis ftdkhf thrpj;J jFe;j tpilfis tl;lkplL fhl;lTk;> jq;fs; mspf;Fk; tpguq;fs; midj;Jk; vdJ fy;tp kw;Wk; jq;fspd; cah; ,uj;j mOj;jk; kw;Wk; mjdhy; cUthFk; gf;fthjk; tuhky; jLg;gjw;fhd tpopg;Gzh;it Vw;gLj;j kl;Lk; gad;gLj;jgLk; vd;gij ,jd;%yk; njhptpj;Jf;nfhs;fpNwhk;.

(jdpegh; kjpg;gPl;L gbtk;)

khjphp gbt vz;:

gFjp -1 : Ra tpgug;gl;bay;

1.taJ (Mz;Lfspy;)
m) 40 Kjy; 45 tiu
M) 46 Kjy; 55 tiu
,) 56 Kjy; 65 tiu

2.ghypdk;
m) Mz;
M) ngz;

3.FLk;gj;jpd; tif
m) jdpf; FLk;gk;
M) $l;Lf; FLk;gk;

4.FLk;gj;jpd; khj tUkhdk;
m) & 3000 Kjy; & 8000 tiu
M) & 8001 Kjy; & 14000 tiu

,) & 14001 Kjy; & 20000 tiu

<) & 20000f;F Nky;

5.jpUkzk; gw;wpa jfty;

m) jpUkzk; Mdth;

M) jpUkzk; Mfhjth;

,) tpthfh;j;J Mdth;

6.czT Kiwfs;

m) irt czT cl;nfhs;Sjy;

M) mirt czT cl;nfhs;Sjy;

7.Ntiyiag; gw;wpa jfty;

m) muR Ntiy

M) jdpahh; Ntiy

,) ,y;yj;jurp

c) Xa;T ngw;Nwhh

8.fy;tpj;jFjp

m) gbf;fhjth;fs;

M) 1 Mk; tFg;G Kjy; 8 Mk; tFg;G tiu

,) 9 Mk; tFg;G Kjy; 12 Mk; tFg;G tiu

<) gl;ljhhp

9.jdpgl;l gof;ftof;fq;fs;

m) Gif gpbj;jy;

M) kJ mUe;Jjy;

,) kJ mUe;Jjy; kw;Wk; Gif gpbj;jy;

<) ve;j jPa gof;fq;fSk; ,y;iy

10.FLk;g egUfSs; NtW ahUf;fhtJ cah; ,uj;j mOj;jk; cs;sjh?

m) Mk;

M) ,y;iy

11.jq;fSf;F vj;jid Md;Lfshf cah; ,uj;j mOj;jk; Neha; cs;sJ?

m) Xh; Mz;bw;Fk; Fiwthf

M) 2 Kjy; 3Mz;Lfs;

,) 4 Kjy; 5Mz;Lfs;

<) 5 Mz;Lf;F Nky;

12. cah; ,uj;j mOj;j nra;jpfisg; gw;wp ,jw;F Kd; ahhplkpUe;J njhpe;J nfhz;Bh;fs;?

m) ez;gh;fs; kw;Wk; cwtpdh;fs;

M) kUj;Jt Jiw rhh;e;jth;fsplk;

,) tpsk;gu rhjdq;fs;

<) kw;wit

13.jw;NghJ cah; ,uj;j mOj;jjpw;fhd jFe;j rpfpr;ir Kiwfis Nkw;nfhs;fpwPh;fsh?

m) Mk;

M) ,y;iy

gFjp :2

gphpT m: cah; ,uj;j mOj;jk; gw;wpa tpdhf;fs**;**

1.%isapd; Kf;fpa gzp

m) Rthrpj;jy;

M) ,uj;jj;ij Rj;jg;gLj;Jjy;

,) fopTg;nghUl;fis mfw;Wjy;

<) clypd; midj;J nray;ghLfisAk; fl;Lg;gLj;Jjy;

2.,jaj;jpd; Kf;fpa gzp

m) czit rPuzpj;jy;

M) ,uj;j Xl;lj;ij rPuhf;Fjy;

,) cly; mirT

<) Rthrpj;jy;

3.xU ekplj;Jf;F ,jak; vj;jid Kiw Jbf;Fk;?

m) 70 Kjy; 80 tiu

M) 50 Kjy; 70 tiu

,) 40 Kjy; 60 tiu

<) 100f;F Nky;

4.,uj;j mOj;jk; vd;gJ
m) ,jaj;jpw;F tUk; ,uj;jj;jpd; msT mjpfhpj;jy;
M) ,jaj;jpypUe;J ntspNaWk; ,uj;jj;jpd; msT mjpfhpj;jy;
,) ,jaj;Jbg;gpd; NghJ ,uj;jk; ,uj;jf; Foha;fspy; Vw;gLj;Jk; mOj;jk;
<) ,uj;jk; cly; cWg;Gfspy; Vw;gLj;Jk; mOj;jk;

5.,uj;j mOj;jk; ve;j fUtpapdhy; msf;fg;gLfpwJ.?
m) ntg;g khdp (njh;kh kPl;lh;)
M)];Nfd; fUtp
,) FSf;Nfh kPl;lh;
<)];gpf;Nkh khNdh kPl;lh;

6.kdpjdpd; ,uj;j mOj;jj;jpd; msT
m) 170/110 kp.kP nkh;Fhp
M) 120/80 kp.kP nkh;Fhp
,) 90/50 kp.kP nkh;Fhp
<) 140/100 kp.kP nkh;Fhp

7.cah; ,uj;j mOj;jk; tUtjw;fhd fhuzk;
m) khRgl;l czT> kJmUe;Jjy; kw;Wk; Gifg; gpbj;jy;
M) mjpfkhd cg;ig cl;nfhs;Sjy;> kJmUe;Jjy;> Gif gpbj;jy;
,) rj;J FiwghL> mjpfkhd cg;ig cl;nfhs;Sjy;> Gif gpbj;jy;
<) mjpfkhd cg;ig cl;nfhs;Sjy;> khWgl;l czT kw;W ePh;

8.”iryz;l; fpy;yh;” vd;W ve;j Nehia miof;fpNwhk;?
m) cah; ,uj;j mOj;jk;
M) fhrNeha;
,) ,sg;G Neha;

<) tapw;Wg;Gz;

9. cah; ,uj;j mOj;jk; vd;gJ
m) nfhOg;gpd; msT mjpfhpj;jy;
M) ,d;Rypd; msT mjpfhpj;jy;
,) ,uj;jj;jpd; rh;f;fiu msT mjpfhpj;jy;
<) ,uj;j mOj;jk; mjpfhpj;jy;

10. cah; ,uj;j mOj;jk; clYf;F Mgj;J jUtdthf fUjg;gLtJ Vd?
m) Rthr NfhshW Vw;gLfpwJ
M) m[puzk; Vw;gLfpwJ
,) ,jaj;jpd; Ntiy gSit mjpfhpf;fpwJ
<) fz;ghh;it FiwfpwJ

11. cah; ,uj;j mOj;jj;jpd; nghJthd mwpFwpfs;
m) jiytyp> kaf;fk; kw;Wk; ghh;it kq;Fjy;
M) jiytyp> the;jp> %r;R jpzwy;
,) tapw;Wg;Nghf;F> the;jp> kaf;fk;
<) the;jp> tapw;WNghf;F kw;Wk; jiytyp

12. cah; ,uj;j mOj;jj;jpdhy; Kf;fpakhf ghjpf;fgLk; cWg;G
m) ,jak> EiuaPuy; kw;Wk; %is;
M) ,jak;> fy;yPuy kw;Wk; EiuaPuy;
,) ,jak;> EiuaPuy; kw;Wk; Fly;
<) ,jak;> %is kw;Wk; rpWePufk;

13. cah; ,uj;j mOj;jj;jpd; msT
m) 90/60 kp.kP nkh;Fhpf;F fPo;
M) 140/90 kp.kP nkh;Fhpf;F Nky;
,) 120/80 kp.kP nkh;Fhp
<) 100/70 kp.kP nkh;Fhp

14. cah; ,uj;j mOj;jk; %isapy; Vw;gLk; NghJ cz;lhFk; Kf;fpakhd Neha;?
m) gf;fthjk;
M) Nfd;rh; (Gw;WNeha;)

,) ghf;Bhpah njhw;W
<) %isf; fha;r;ry;

gphpT M: gf;fthjk; gw;wpa tpdhf;fs;

15. gf;fthjk; vd;gJ
m) rpWePufk; jd; gzpia ,oj;jy;
M) ,jak; jd; gzpia ,oj;jy;
,) %is jd; gzpia ,oj;jy;
<) fy;ypuy; jd; gzpia ,oj;jy;

16.cyfpy; mjpfkhd ,wg;ig cz;lhf;Fk; Neha;fspy; ,uz;lhtJ ,lj;jpy; cs;s Neha; vJ?
m) gf;fthjk;
M) Gw;WNeha;
,) ,UjaNeha;
<) ,uj;jNrhif

17.gf;fthjj;jpdhy; clypy;; vd;d khw;wk; Vw;gLk;?
m) rpWePh; ntspNaWjy;
M) %is jz;Ltl jput Ro;w;rp
,) cly; cWg;G nraypog;G
<) ,oj;j xl;lk;

18.gf;fthjk; tUtjw;fhd Kf;fpa mwpFwpfs; vd;d?
m) cly;gFjpfs; czh;r;rp mw;Wk;> jirfs; jsh;r;rp miljy; kw;Wk; Ngr;R jpzwy;
M) tapw;WNghf;F> the;jp kw;Wk; Kf mikg;|G NfhZjy;
,) the;jp> %r;R jpzwy; kw;Wk; typg;G
<) %r;R jpzwy;> typg;G kw;Wk; Ngr;R jpzwy;

19. vt;thW cah; ,uj;j mOj;jk; gf;fthj Nehia cz;lhf;FfpwJ?
m) ,uj;jf; Foha; Nrjg;gLjy;

M) ,uj;j rh;f;fiuapd; msit mjpfhpj;jy;
,) nfhOg;Ge; ej;J mjpfhpj;jy;
<) ,uj;j mZf;fpd; vz;zpifia mjpfhpj;jy;

20.gf;fthjj;jpd; mwpFwpfs;
m) jiytyp> the;jp> fha;r;ry;
M) fha;r;ry;> the;jp> tapw;WNghf;F
,) ,Uky;> fha;r;ry;> the;jp
<) Ra epidit ,oj;jy;> jiytyp kw;Wk; typg;G

gphpT - ,: cah; ,uj;j mOj;j NehahspfSf;F gf;fthjk; tuhky; jLf;Fk; topKiwfSf;fhd tpdhf;fs;

21. cah; ,uj;j mOj;j NehahspfSf;F gf;fthjk; tuhky; vt;thW jLf;fyhk;?
m) cly; vil mjpfhpj;jy;
M) cah; ,uj;j mOj;jij
,) mjpfkhf NjdPh; mUe;Jjy;
<) Fiwthd Nehuk; cwq;Fjy;

22. cah; ,uj;j mOj;j NehahspfSf;fhd jFe;j czT tiffs;
m) cg;G Fiwe;j> nfhOg;Gr; rj;J Fiwe;j kw;Wk; khTr;rj;J Fiwe;j czT tiffs;
M) cg;G mjpfkhd> Gujrj;J Fiwe;j kw;Wk; nfhOg;Gr;rj;J mjpfkhd czT tiffs;
,) cg;G mjpfkhd> nfhOg;Gr;rj;J Fiwthf kw;Wk; Gujrj;J Fiwthf cs;s czT tiffs;
<) cg;G Fiwe;j> Gujr;rj;J mjpfkhd kw;Wk; nfhOg;Gr;rj;J mjpfkhf cs;s czTtiffs;

23.xU kdpjd; mtrpakhf mUe;j Ntz;ba ePhpd; msT
m) Fiwe;jJ 6 lk;sh;fs;
M) Fiwe;jJ 10 lk;sh;fs;
,) Fiwe;jJ 8 lk;sh;fs;
<) Fiwe;jJ 12 lk;sh;fs;

24.,uj;j mOj;jj;ij Fiwg;gjw;F ehs;NjhWk; clw;gapw;rp nra;a Ntz;ba Nehuk;
m) 30 Kjy; 45 epkplq;fs;
M) 10 Kjy; 25 epkplq;fs;
,) 20 Kjy; 35 epkplq;fs;
<) 60 Kjy; 75 epkplq;fs;

25.Gifg;gpbj;jyhy; ,uj;j Fohapy; Vw;gLk; tpisTfs;

m) ,jaj;jpw;F nry;Yk; ,uj;j Xl;lj;jpd; msT mjpfhpj;jy;

M) ,jaJbg;G mjpfhpj;jy;

,) ,jaj;jpw;F nry;Yk; ,uj;j mZf;fs; msT FiwfpwJ

<) ,uj;j Foha; RUq;Fjy;

26.kd mOj;jij Fiwg;gjw;fhd topKiwfspy; Xd;W

m) Fiwthd Neuq;fs; cwq;Fjy;

M) nky;ypa ,irfis Nfl;ly;

,) mjpfkhd czTfis cl;nfhs;Sjy;

<) njhlh;e;J Ntiy nra;jy;

27.cly; vilia Fiwg;gjw;fhd topKiwfs;

m) Fiwthd ePh; mUe;Jjy;

M) mjpfkhd Neuk; cwq;Fjy;

,) clw;gapw;rp nra;jy;

<) czT mUe;jhky; ,Uj;jy;

28.kdpjd; ehs; Xd;Wf;F vt;tsT Nehuk; cwq;f Ntz;Lk;?

m) 12 kzp Neuq;fs;

M) 8 kzp Neuq;fs;

,) 10 kzp Neuq;fs;

<) 6 kzp Neuq;fs;

29. cah; ,uj;j mOj;jj;ij vt;thW rPh;gLj;JtJ?

m) Kiwahd kUe;Jfis cl;nfhs;shik

M) kUj;Jthpd; ghpe;Jiwapy;yhj kUe;Jfis cl;nfhs;Sjy;

,) Fwpj;j Nehuj;jpy; jFe;j kUe;Efis cl;nfhs;Sjy;

<) Nehuk; fpilf;Fk; NghJ kl;Lk; kUe;Jfis cl;nfhs;Sjy;

30. cah; ,uj;j mOj;jj;jpw;fhd rhpahd rpfpr;irKiw

m) nfhOg;Gr; rj;J epiwe;j czT> Fiwe;j Neu cwf;fk; kw;Wk; clw;gapw;rp nra;jy;

M) Fiwe;j msT czT mUe;Jjy;> clw;gapw;rp nra;jy; kw;Wk; kUe;Jfis Kiwahf cl;nfhs;Sjy;

,) Fiwe;j msT ePh; mUe;Jjy> mjpf czT cl;nfhs;Sjy; kw;Wk; kUe;Jfis Kiwahf cl;nfhs;Sjy;

<)cg;G msT Fiwe;j czTfis cl;nfhs;Sjy;> clw;gapw;rp nra;jy; kw;Wk; Kiwahf kUe;Jfis cl;nfhs;Sjy;

APPENDIX - III

TEACHING MODULE ON PREVENTION OF STROKE AMONG HYPERTENSIVE PATIENTS

GENERAL OBJECTIVES:

At the end of the teaching programme, the hypertensive patient will be acquire adequate knowledge on prevention of stroke and will be able to apply the healthy regimen in their daily living so as to prevent it.

SPECIFIC OBJECTIVES:

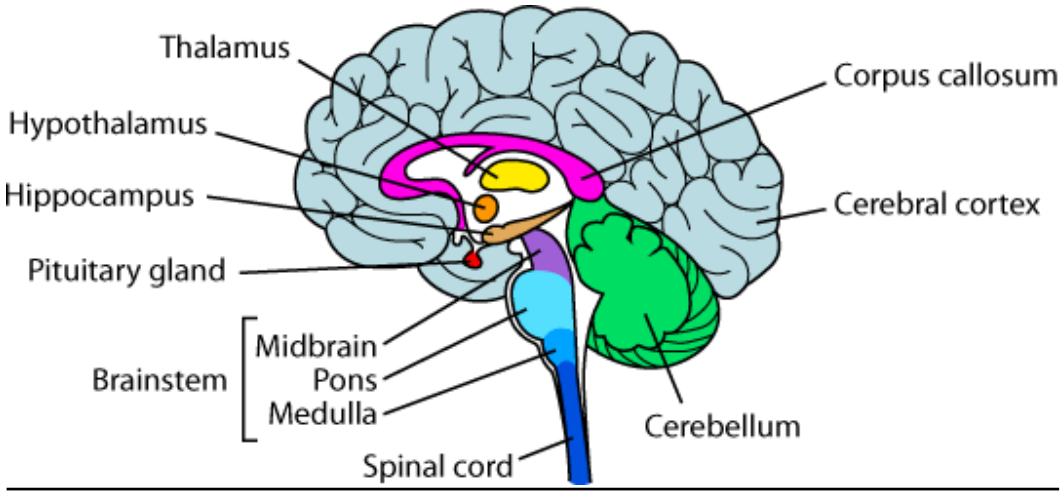
At the end of the teaching programme, participants will be able to:

- explain the anatomy and physiology of brain and heart
- what is meant by blood pressure
- what is meant by hypertension
- enumerate the cause of hypertension
- list out the signs and symptoms of high blood pressure
- what are the main complication of hypertension
- what do you mean by stroke
- list out the causes of stroke
- how hypertension causes hemorrhagic stroke
- enlist the symptoms of stroke
- Explain the preventive measures for stroke.

INTRODUCTION

Life style diseases are set of diseases usually related to our changing urban way of life. The Important factors contributing to these disorders are too much work, too much stress, round the clock working hours, bad eating habits, and sedentary life with little or no exercise. In many diseases our life style may be an important causative factor or may aggravate the disease. One of the important life style related disease is hypertension.

BRAIN



The brain, together with the spinal cord, makes up the **central nervous system (CNS).**This is the 'control centre' that coordinates the body's function. The human brain is hugely interconnected but three major components can be identified: the

cerebrum, brainstem, and cerebellum. This is the ‘control centre’ that coordinates the body’s function.

HEART

The heart is a hollow organ that pumps blood throughout the blood vessel by repeated, rhythmic contraction. The adult human heart has mass of between 250 and 350 grams and is about the size of a fist. It is situated in the left side of chest cavity. The average human heart, beating at 72 beats per minute. The main function of heart is circulation.

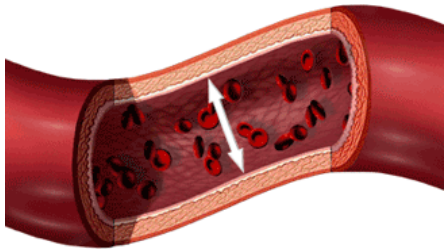
BLOOD PRESSURE

Blood pressure is the force of blood pushing up against the blood vessel walls. The higher the pressure the harder the heart has to pump and it increases the work load of heart

A blood pressure reading appears to be 2 numbers. The first and higher of the two is a measure of systolic pressure is the peak pressure in the arteries, which occurs near the end of the cardiac cycle when the ventricles are contracting. Diastolic pressure is the minimum pressure in the arteries, which occurs near the beginning of the cardiac cycle when the ventricles are filled with blood.

The blood pressure usually is measured with a small, portable instrument called a blood pressure cuff (sphygmomanometer). Unit is the millimeters of mercury (mm Hg).

HYPERTENSION



Hypertension, also referred to as high blood pressure, is a condition in which arteries have persistently elevated blood pressure. Every time the human heart beats, it pumps blood to the whole body through the arteries.

High blood pressure is called “the silent killer” because it often causes no symptoms for many years, even decades.

Recommendations of joint national committee on prevention detection evaluation, treatment of high blood pressure, the classification of blood pressure for adults aged 18 years or older as follows.

Hypertension:
Classification by JNC 7

	Systolic BP		Diastolic BP
Normal	<120	&	<80
Pre-hypertension	120-139	or	80-89
Stage I	140-159	or	90-99
Stage II	≥160	or	≥100

JNC 7, 2002

People with more than two blood pressure readings of 140 /90 or higher, are said to have high blood pressure. If the pressure remains high, your doctor will probably begin treatment.

CAUSES

The exact causes of hypertension are usually unknown these include;

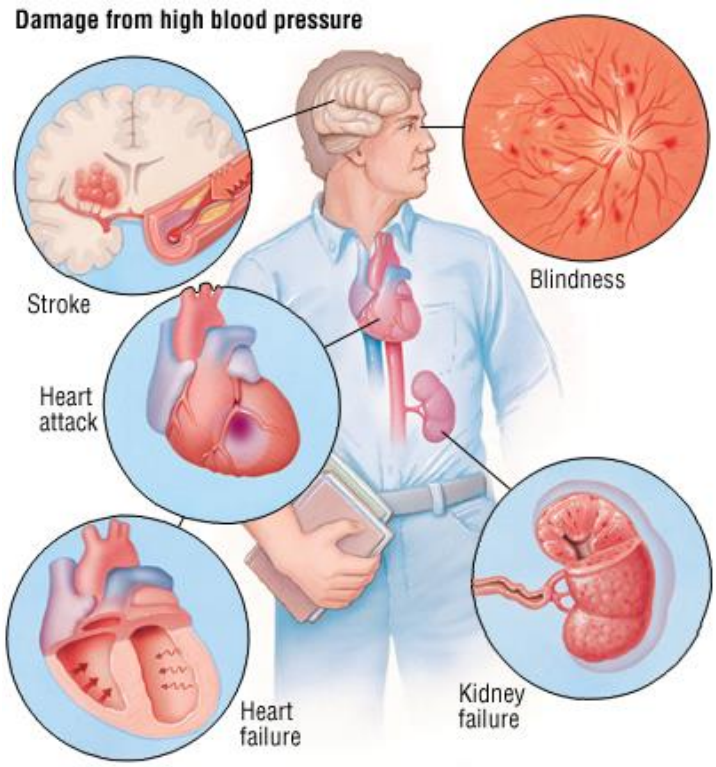
a) Obesity or being overweight
b) Diabetes
c) smoking

d) Sedentary lifestyle
e) Lack of physical activity
f) High levels of salt intake
g) Insufficient calcium, potassium, and magnesium consumption.
h) Vitamin D deficiency
i) High levels of alcohol consumption.
j) Stress
k) Aging
l) Medicines such as birth control pills
m) Genetics and a family History of hypertension
n) Chronic kidney disease
o) Adrenal and thyroid problems or tumors

SYMPTOMS OF HIGH BLOOD PRESSURE

One of the most dangerous aspects of hypertension is that you may not know that you have it. The main symptoms are severe headache, Dizziness, Blurred vision.

COMPLICATIONS



One of the main complications which occur due to uncontrolled hypertension is stroke. The main Organs affected by hypertension are heart, eye and kidney.

STROKE

Stroke is the second leading cause of death Worldwide.

A stroke. Or cerebrovascular (CVA) is the rapid loss of brain function due to disturbance in the blood supply to the brain. This can be due to ischemia (lack of blood flow) caused by blockage (thrombosis, arterial embolism), or a hemorrhage.

Stroke is a medical emergency and can cause permanent neurological damage and death. High blood pressure is the most important modifiable risk factor of stroke.

The patient may suddenly lose the ability to speak, there may be memory problems, or one side of the body can become paralyzed. If a person has paralysis on right side of body, left side of brain is affected.

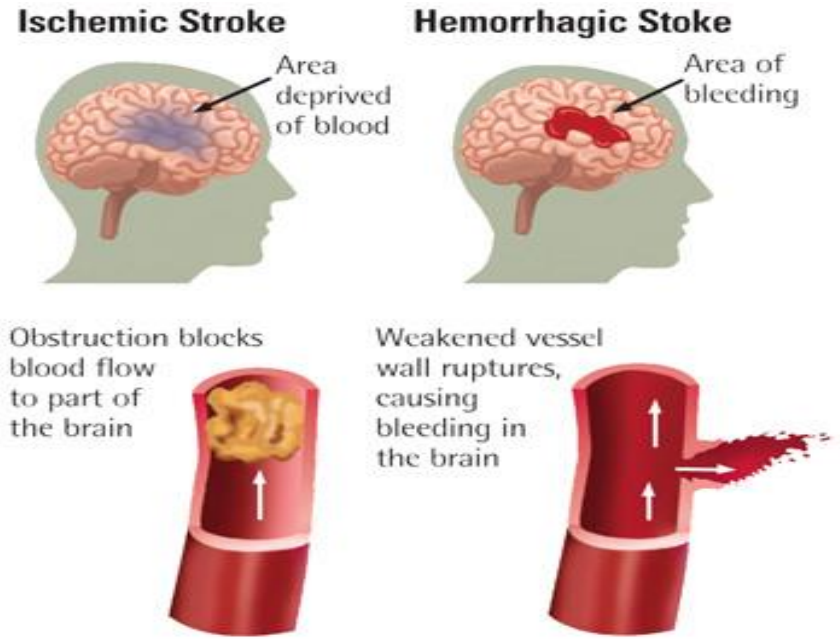
INCIDENCE

According to WHO, High blood pressure contributes more than 12.7 million of stroke worldwide. Stroke deaths in India reached 9.2% of total deaths.

TYPES

The two main types of stroke include ischemic stroke and hemorrhagic stroke

1. Ischemic stroke accounts for about 87% of all strokes and is caused by a **blood clot** that blocks or plugs a blood vessels in the brain
2. A hemorrhagic stroke caused by a vessel that breaks and bleeds into the brain



HOW HYPERTENSION CAUSES STROKE:

ISCHEMIC STROKE	HEMORRHAGIC STROKE

High blood pressure deposits the cholesterol in the walls of the brain blood vessels.	**High blood pressure causes weakness of the blood vessel wall in the brain.**
↓	↓
Blood supply started to reduce. Blood cells trapped over the cholesterol deposited area	**Blood vessel wall stretch and become balloon shaped.**
↓	↓
Gradually, blood vessel perimeter reduce	**Continues high blood pressure rupture the weakened blood vessel**

↘↙

↓

Alteration in the

blood supply of brain causes in metabolism

Changes within 30seconds

↓

Metabolism interrupted within 2min

↓

Brain cells activity reduced and dies within 5 min

<u>SYMPTOMS</u>

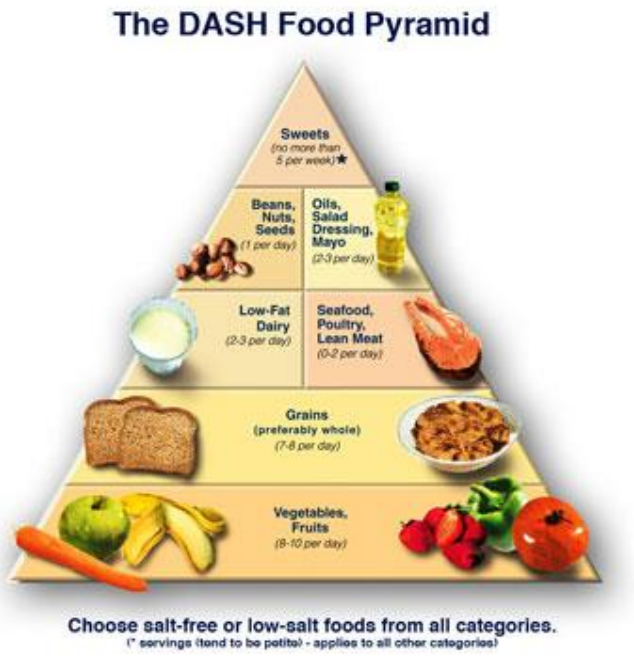
a) Face dropping,

b) Arm/leg weakness,
c) speech difficulty
d) paralysis or numbness in any part of the body
e) nausea and vomiting
f) difficulty in walking
g) irregular breathing
h) loss of consciousness

PREVENTION

Many factors help to reduce blood pressure thereby preventing the risk of stroke.

1) DAS H - DIET PLAN



i. The DASH eating plan is based on 2000 calories a day.

ii. The low salt dietary approaches to stop hypertension on are proven to lower blood pressure. This diet is not only rich in proteins, nutrients and fiber.

iii. Diet rich in proteins are cereals, ground nuts almonds ,Skinless chicken ,fish, leafy vegetables like Spinach , Palak ,cauliflower, fenugreek leaves ,raddish leaves.

iv. Drink plenty of water at least 10 glasses.

v. Diet rich in potassium are tomato, watermelon, banana, and green vegetables.

vi. Diet rich in Calcium are milk and milk products, leafy vegetables, etc

vii. Diet rich in Magnesium are nut such as almonds, legumes, green leafy vegetables, brown rice ,banana

2) EXCERCISE REGULARLY

People should be indulged in normal physical activities to get significant healthy benefits. Exercises will lower blood pressure by an average of 5—10 mmHg. Daily exercising for 30 mins is very good. Some of the regular exercises which can be done regularly.

AEROBIC EXERCISES:

These are the activities involving large muscles done for the extended period of time, that makes the lungs and heart work for harder. It can be done for weight loss, also will provide cardiovascular benefits .examples are, walking, cycling swimming, jogging etc

3) QUIT SMOKIG

Smoking increases is blood pressure because Nicotine is a stimulant and it narrows the lumen of blood vessels. Smoking raises blood pressure from 5—10 mmHg or more.

4) REDUCE STRESS

a) Go for a Walk30-45Miniutes/day
b) Call a good friend
c) Listen to music
d) drink award cup of coffee

5) REDUCE SALT INTAKE

Obesity can lead to disease such as diabetes mellitus type2, high blood cholesterol. The body mass index (BMI) determines the degree of your excess body weight. Normal (BMI) should be 20—25. If BMI is calculated as Wt/ht m2

The most effective method for weight loss is reducing the number of calories consumed while burning the calories through physical activity. You can achieve this either by cutting back on your food intake, by increasing physical Activity, or ideally, by doing both.

6) MANAGING HIGH BLOOD PRESSURE

High blood pressure usually has no warning signs. Therefore, it is important that you have regular blood pressure checks. Regular blood pressure monitoring is done to detect the early symptoms of complications.

7) LIMIT THE INTAKE OF ALCOHOL

Alcohol is a targeted culprit in boosting blood pressure hypertension makes your heart work harder than the normal, increase the stress on your heart muscle and arteries leading to thickened heart muscle which, cause irregular heartbeats high blood pressure can also lead to putting you at high risk for stroke.

8) GET ENOUGH SLEEP

In a recent study, both systolic and diastolic blood pressure was higher in people who slept less than 8hrs at night. Sleep helps to regulate stress hormones and maintains health of nervous system.

9) FOODS WHICH CAN TAKEN AS PLENTY

There are several simple guidelines to follow in order to protect and improve your health and to live longer and more satisfying life.

Incorporate more fresh fruits and vegetables in the diet. Seasonal fruits and vegetables such as grape and melons for summer are very good for health.

Try to eat three regular meals a day and avoid snacking in between. The dinner and the tea time in the evening have to be taken in quantity.

Instead drink at least 2—3L/day

10) FOODS WHICH CAN AVOID

- Limit calorie intake by eating less and taking nutritious foods. Avoid eating cakes, pastries, pizzas, regularly, as it contains more sugar and fat
- Limit drinking carbonated sugary drinks and energy drinks and like coca cola, Pepsi etc
- Avoid Tran's fats and saturated fats. Trans fats are mostly found in hydrogenated oils, and saturated fat is the fat found in meat.
- Avoid deep-fried foods. Instead, choose food that has been cooked by a healthy cooking method such as steaming. Avoid reusing the oils
- Alcohol contains a lot of empty calories which will trigger the normal function of the body. People who are taking regularly can have it in minimum quantity only occasionally.
- Avoid eating foods from restaurants as it contains more Trans fat to make the food tastier. Instead carry homemade foods to places. Meats should be lean with very little fat, chicken with skin out is best
- Reduce intake of salt
- Limit the intake of coffee

SUMMARY:

Hypertension can be controlled by the life style modification the health should be maintained by person to avoid ill effects, because prevention is better than cure.

CONCLUSION:

This self instructional module is able to educate the hypertensive patients for life style modifications that it may decrease the morbidity and mortality

BIBLIOGRAPHY:

- Lewis (2013) text book of medical surgical nursing (13th edn) New Delhi, Elsevier
- Brunner and Suddarth (2007) medical surgical nursing (10th edn) Philadelphia, LWW
- Joyce M. Black (2007) medical surgical nursing (7th edn) New Delhi, Elsevier
- Nettina. Ms (2006) Lippincott manual of nursing practice (8th edn) New Delhi, jaypee brother medical publishers
- Susan L Woods (2005) cardiac nursing. (5th edn) Philadelphia, Lippincott Williams & Wilkins

E-SORUCES:

www.medcinenet.com

http:www.medlinepwww.lookfodiagnosis.comwww.About.comwww.wikipedia.com

உயர் இரத்த அழுத்த நோயாளிகளுக்கு பக்கவாதம் வராமல் தடுப்பதைப் பற்றிய தகவல்கள்

வழிகாட்டுபவர்:

திருமதி.ரெஜினா ராணி எம்.எஸ்சி (ந), பி.ஹெச்டி.
முதல்வர்,
ராஸ் அகாடமி நர்சிங் கல்லூரி,
பூவந்தி.

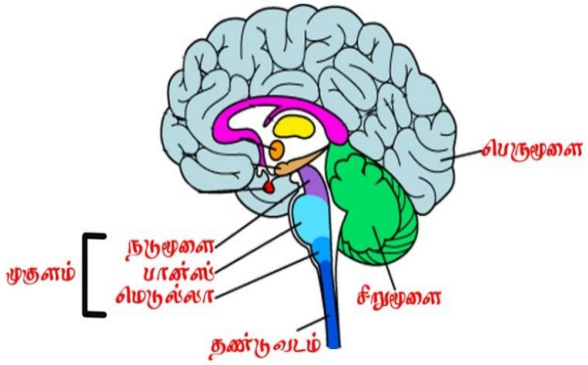
தயார்செய்தவர்:

ஹ.விஜயலட்சுமி ,
எம்.எஸ்சி (ந) இரண்டாம் வருடம்,
ராஸ் அகாடமி நர்சிங் கல்லூரி,
பூவந்தி.

உயர் இரத்த அழுத்த நோயாளிகளுக்கு பக்கவாதம் வராமல் தடுப்பதைப் பற்றிய தகவல்கள்

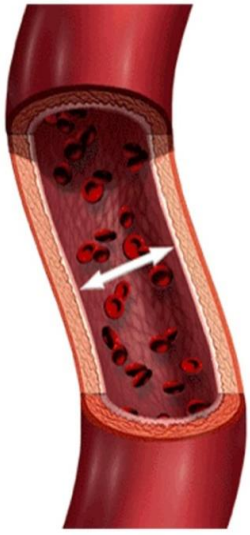
முன்னுரை:

தற்போது வாழும் நகர்புற மக்களின் வாழ்க்கைமுறை மாற்றதினால் பலவித நோய்கள் உருவாகிறது. அதிகமான வேலைப்பளு மற்றும் தொடர்ந்து வேலைபார்த்தல், அதிகமான மன அழுத்தம், முறையான உணவுபழக்கம் இல்லாமை, மற்றும் உடற்பயிற்சி செய்யாமல் இருத்தல் அகியவை நோய்கள் உருவாக காரணமாகின்றன. இவ்விதமான வாழ்கைமுறை மாற்றத்தினால் எற்படும் நோய்களுள் ஒன்று "உயர் இரத்த அழுத்தம்" என்பதாகும். இந்த உயர் இரத்த அழுத்தம் நோயால் உண்டாகும் விளைவுகளில் இருந்து தங்களை எவ்வாறு பாதுகாத்துக் கொள்வது என்பதை கீழ்கண்டவாறு காண்போம்.



மூளை:

உயர் இரத்த அழுத்தத்தினால் மிகவும் பாதிக்கப்படக்கூடியது மனிதனின் மூளையே ஆகும். மனித மூளையனது பெருமூளை, சிறுமூளை, முகுளம், தண்டுவடம், போன்ற பகுதிகளை கொண்டுள்ளன. மூளை உடலின் அனைத்து வேலைகளையும் ஒருங்கினைத்து செயல்படுகிறது.



உயர் இரத்த அழுத்த நோய்:

உயர் இரத்த அழுத்த நோய் என்பது இதயத்தின் இரத்தக் குழாயான தமனியில் இரத்த அழுத்தமானது தொடர்ந்து அதிகமாக இருப்பதாகும். இதனை "இரத்த கொதிப்பு நோய்" என்றும் "சைலண்ட் கில்லர் நோய்" என்றும் அழைக்கபடுகிறது. உயர் இரத்த அழுத்தத்தை வருமுன் தடுத்தல், கண்டறிதல் மற்றும் அதன் சிகிசைக்காக அமைக்கப்பட்ட "இணை தேசியக்குழு" இரத்த அழுத்தத்தை 18 வயதினற்க்கு மேற்பட்டோர்க்கு இரத்த அழுத்தத்தை கீழ்கண்டவாறு வகைப்படுத்துகிறது.

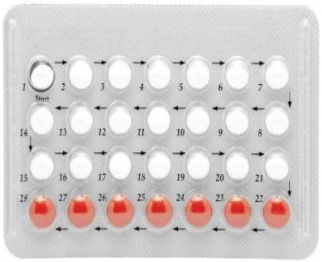
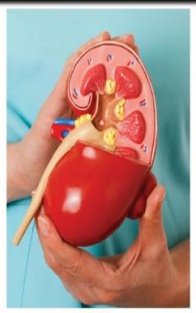
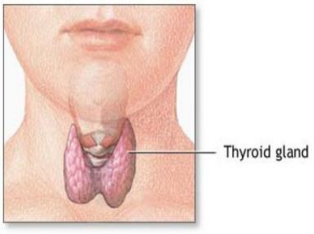
	இதயம் சுருங்கும் போது இரத்த அழுத்தம் (மி.மீ மெர்குரி)		இதயம் விரிவடையும் போது இரத்த அழுத்தம் (மி.மீ மெர்குரி)
சராசரி இரத்த அழுத்தம்	< 120	&	<80
உயர் இரத்த அழுத்தத்தின் முன்னிலை அளவு	120 - 139	or	80 -89
முதல் நிலை (உயர் இரத்த அழுத்தம்)	140 -159	or	90 - 99
இரண்டாம் நிலை (உயர் இரத்த அழுத்தம்)	≤ 160	or	≥ 100

உயர் இரத்த அழுத்தம் வருவதற்கான காரணங்கள்:

உயர் இரத்த அழுத்தம் வருவதற்கான காரணங்கள் கீழ்கண்டவை

1.புகை பிடித்தல்	

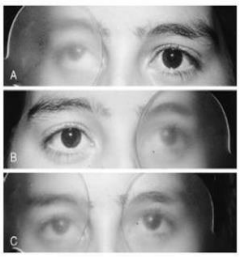
2.அதிகமான உடல் எடை	
3.சர்க்கரை நோய்	
4.சரியாக உடல்பயிற்சி செய்யாமல் இருத்தல்	
5.அதிகமான அளவு உப்பை உட்கொள்ளுதல்	
6.அதிகமாக மது அருந்துதல்	

7.மன அழுத்தம்	
8.வயது பரிமாணம் / வயதடைதல்	
9.குழந்தைபேறு கட்டுபாட்டிற்கான மாத்திரையை அதிகமாக உட்கொள்ளுதல்	
10.அட்ரினல் மற்றும் சிறுநீரகத்தில் ஏற்படும் பிரச்சனைகள்	
11.தைராய்டு சுரப்பியில் ஏற்படும் பிரச்சனைகள்	

உயர் இரத்த அழுத்தத்தினால் ஏற்படும் அறிகுறிகள்:

உயர் இரத்த அழுத்தத்தினால் கீழ்கண்ட அறிகுறிகள் ஏற்படும்.

1.தலைவலி

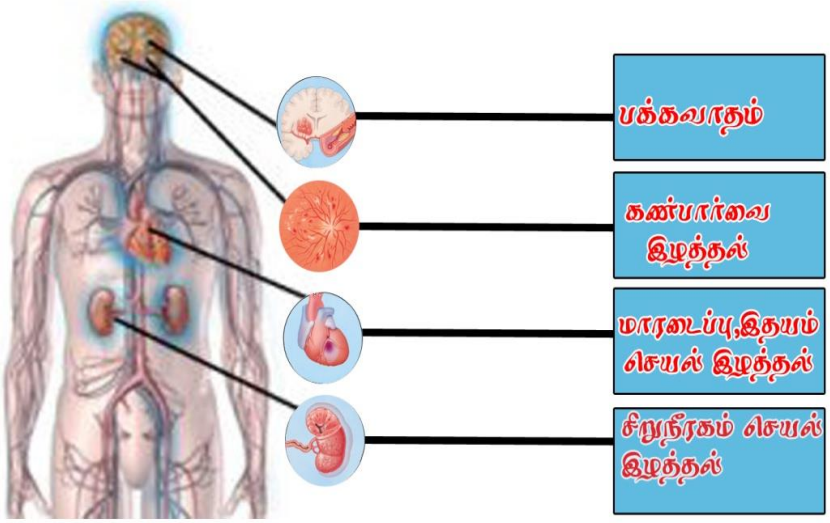


2.கண்பார்வை மங்குதல்

3.மயக்கம்

உயர் இரத்த அழுத்தத்தினால் ஏற்படும் விளைவுகள்:

உயர் இரத்த அழுத்தமானது இதயம், மூளை, சிறுநீரகம் மற்றும் கண்கள் ஆகிய உறுப்புகளை பாதிக்கிறது. இவற்றில் மூளையை பாதித்து பக்கவாதத்தை உண்டாக்குகிறது



பக்கவாதம்:

உலகில் ஏற்படும் இறப்பு விகிதத்தில் இரண்டாவது இடத்தில் பக்கவாத நோய் உள்ளது.பக்கவாதநோய் என்பது மூளைக்கு செல்லும் இரத்த ஓட்டத்தில் இடையூறு ஏற்படுவதால் மூளை தன் செயலை இழக்கிறது. இரத்த ஓட்ட இடையூறானது இரத்தக்குழாயில் அடைப்பு ஏற்படுவதினாலோ (நிலையான மற்றும் நகர்ந்து செல்லும் இரத்த கொழுப்புக் கட்டிகள்) அல்லது இரத்தக் கசிவு ஏற்படுவதாலோ வரலாம்.

நிகழ்வுகள்:

உலக சகாதார நிறுவனத்தின் (WHO) விபரப்படி உலக அளவில் 12.7 மில்லியன் மக்கள் பக்கவாதத்தினால் (உயர் இரத்த அழுத்தத்தினால் ஏறபடும் பக்கவாதம்) பாதிக்கபடுகின்றனர்.குறிப்பாக இந்தியாவில் பக்கவாதத்தினால் 9.2 % மக்கள் இறக்கின்றனர்.

உயர் இரத்த அழுத்தம் எவ்வாறு பக்கவாதத்தினை ஏற்படுத்துமெனறது:

மூளையின் இரத்தக் குழாய் அடைப்பினால்ஏற்படும் பக்கவாதம்	மூளையின் இரத்த கசிவினால் ஏற்படும் பக்கவாதம
உயர் இரத்த அழுத்தத்தின் காரணமாக மூளைக்குச் செல்லும் இரத்த குழாய்களின் உள்சுவர்களில் கொழுப்புச் சத்து படிகிறது	மூளையின் இரத்த கசிவினால் ஏற்படும் பக்கவாதம் உயர் இரத்த அழுத்தத்தின் காரணமாக மூளைக்குச் செல்லும் இரத்த குழாயின் சுவர்கள் பலவீனமடைகின்றது.
⇩	⇩
மூளைக்குச் செல்லும் இரத்த ஓட்டம் குறைகிறது.மேலும் படிந்த கொழுப்புச் சத்தின் மீதே இரத்தஅணுக்கள் படிகின்றன.	இரத்த குழாயின் சுவர்கள் பக்கவாட்டில் விரிவடைந்து பலூன் போன்று ஆகிறது.
⇩	⇩
இரத்த குழாயின் உள் சுற்றளவு படிபடியாக குறைகிறது.	தொடர்ந்து உருவாகும் உயர் இரத்த அழுத்தத்தின் காரணமாக பலவீனமடைந்து இரத்த குழாய் வெடிப்பு ஏற்படுகிறது.

⇩

மூளையின் இரத்த ஓட்டத்தில் மாற்றம் ஏற்படுவதால் மூளையின் வளர்சிதை மாற்றம் 30 விநாடிகளில் மாறுகிறது

⇩

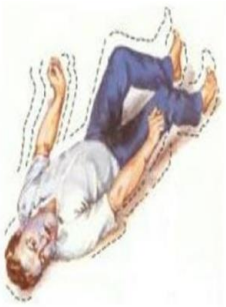
மூளையில் 2 நிமிடங்களில் வளர்சிதை மாற்றம் தடை ஏற்மடுகிறது.

⇩

5 நிமிடங்களில் மூளையின் செல்கள் செயழிலந்து இறக்க நேரிடுகிறது.

7.மூச்சு திணருதல்

8.சுய நினைவை இழத்தல் / மயக்கம் ஏற்படுதல்



9.வலிப்பு வருதல்

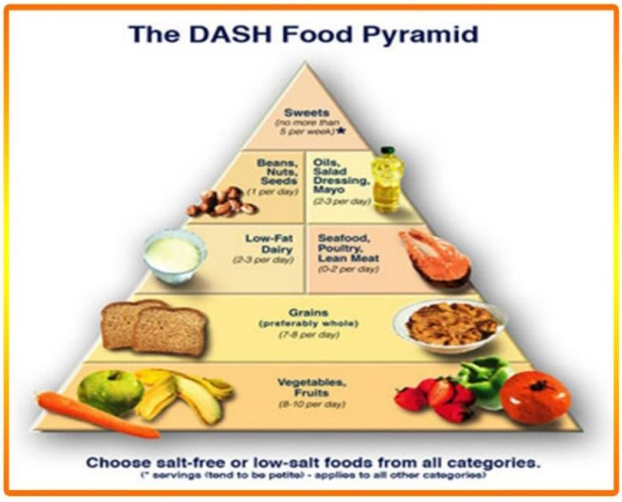
பக்கவாதத்தினை தடுக்கும் முறைகள்:

உயர் இரத்தத்தை குறைத்து பக்கவாதம் வராமல் தடுக்க கீழ்கண்ட வழிமுறைகளை கடைபிடிக்கலாம்.

1.DASH உணவுத் திட்டம்

(Dietary Approches To Stop Hypertension)

- தினந்தோறும் 2000 கலோரி அளவு கொண்ட உணவுகளை உட்கொள்ள வேண்டும்
- உப்பு குறைந்து, புரச்சத்து, நார்சத்து மற்றும் தாது உப்புகள் (பொட்டசியம், கால்சியம், மெக்னீசியம்) நிறைந்த உணவு பொருள்களை உட்கொள்தல் வேண்டும்



பக்கவாதத்தின் அறிகுறிகள்:

1.உடல் உறுப்புகள் மதமதத்தல் / செயல் இழத்தல்

2.முகம் கோணுதல்

3.பேசும் தன்மை குறைதல்

4.பார்வை மங்குதல்

5.வாந்தி / குமட்டுதல்

6.நடக்க இயலாமை

♥ **புரதச்சத்து நிறைந்த உணவுகள்:**
பருப்பு வகைகள், மீன், நிலக்கடலை, பாதாம்பருப்பு, தோலில்லா கோழிகறி, முளைக்கட்டிய பயறுவகைகள்.

பருப்பு வகைகள்

மீன்

♥ **நார்சத்து நிறைந்த உணவுகள்**
கீரைவகைகள், முட்டைகோஸ், ஆரஞ்சு, வாழைப்பழம், கொய்யா

கீரை வகைகள்

ஆரஞ்சு

♥ **பொட்டசியம் நிறைந்த உணவுகள்:**
தக்காளி, தர்பூசணி, வாழைப்பழம், பச்சைக்காய்கறி, இளநீர்.

♥ **கால்சியம் நிறைந்த உணவுகள்:**
பால் மற்றும் பாலிருந்து உருவாகும் பொருட்கள் (பால், பாலாடை, வெண்ணை, மோர், பனனீர்)

♥ **மெக்னீசியம் நிறைந்த உணவுகள்:**
கொட்டை வகைகள் பட்டானி, பாதாம், சிவப்பு அரிசி, பச்சைக்காய்கறிகள்.

♥ **தண்ணீர்:**
ஒரு நாளைக்கு குறைந்தது 10 டம்ளர் தண்ணீர் அருந்த வேண்டும்.

3.முறையான உடற்பயிற்சி:

நடைபயிற்சி, சைக்கிள் ஓட்டுகல், நீச்சல், விளையாடுதல் ஆகிய செயல்களை நாள் ஒன்றுக்கு குறைந்தது 30 நிமிடமாவது மேற்கொள்ள வேண்டும் உடற்பயிற்சி செய்யும் பொழுது இரத்தத்தின் மெர்குரி அளவு 5-10 மி.மீ மெர்குரி குறையும் மற்றும் இதனால் உடல் எடையும் குறையும்.

4.புகை பிடிக்காத்திருத்தல்:

புகை பிடித்தலினால் அதில் உள்ள "நிக்கோடின்" எனும் நச்சுபொருள் இரத்தக் குழாயை சுருங்க செய்து இரத்த அழுத்தத்தின் அளவை 5-10 மி.மீ மெர்குரியும் அதற்கு மேலும் அதிகரிக்கிறது.

5.மன அழுத்தத்தை குறைத்தல்:

நாள் ஒன்றுக்கு 30 முதல் 45 நிமிடம் வரை நடைபயிற்சி செய்ய வேண்டும். நண்பர்களுடன் மகிழ்சியான உரையாடல், மெல்லிய இசைகளை கேட்டல்

6.உடலின் எடையை குறைத்தல்:

உணவுக்கட்டுபாடு மற்றும் உடற்பயிற்சியின் மூலம் குறைக்கலாம். ஊடலின் எடையை கணக்கிட கீழ்கண்ட சூத்திரத்தை பயன்படுத்தலாம்

$$BMI = \frac{\text{உடல்எடை கி.கி.}}{\text{ஊடலின் உயரம் மீ}^2}$$

இதன் மதிப்பு

<18.5	-	மிகவும் குறைவான எடை
18.5-24.9	-	சரியான எடை
25-29.9	-	அதிகமான எடை
>30	-	மிகவும் அதிகமான எடை

7.இரத்த அழுத்தத்தை தொடர்ந்து அளவிடுதல்:

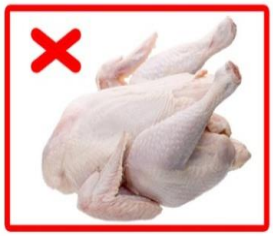
இரத்த அழுத்தத்தை சரியான கால இடை வெளியில் அளவிடுவதன் மூலம் உயர் இரத்த அழுத்ததினால் ஏற்பட இருக்கும் விளைவுகளில் இருந்து தம்மை காத்துக்கொள்ள இயலும்.

தவிர்க்கவேண்டிய உணவு வகைகள்

✡ அதிக வெண்ணெய் மற்றும் சர்க்கரையால் தயாரிக்கப்பட்ட கேக் வகைகள், பீசா, பர்கர்

✡ குளிர்பானங்கள் (கொக்ககோலா,பெப்சி)

✡ மாமிச உணவு வகைகள் (ஆட்டு இறைச்சி தோலுடன் கூடிய கோழி இறைச்சி, மாட்டு இறைச்சி)



✡ எண்ணையில் பொறித்த உணவு வகைகள் வடை, அப்பளம், சேவு, மிக்சர், சமோசா, பஜ்ஜி, பொறித்த கோழிக்கறி, பொறித்த மீன்.

✡ தேனீர் பானங்கள் (காபி,டீ)

✡ உப்பால் பதப்படுத்தப்பட்ட பொருட்கள் மற்றும் உப்பின் அளவு அதிகமாக உள்ள உணவு

8.மது அருந்தாமலிருத்தல்:

மதுவில் உள்ள வேதிப்பொருள் இரத்த உயர் அழுத்தத்தை ஊக்குவிக்ககூடும். எனவே மது அருந்துதலை தவிர்க்க வேண்டும்.

9.தேவையான உறக்கம்:

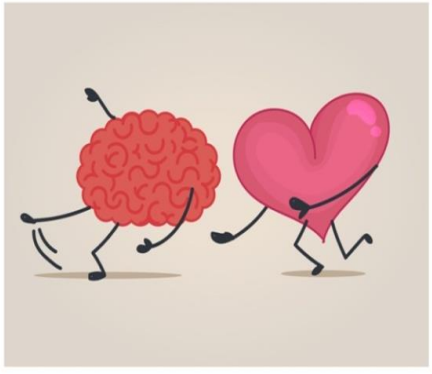
நாள் ஒன்றுக்கு குறைந்தது 8 மணி நேரம் உறக்கம் மேற்கொள்ள வேண்டும்.

10.உணவுபழக்கங்களை முறைப்படுத்துதல்:

- நாள் ஒன்றுக்கு மூன்று வேலையும் உணவு உட்கொள்ளுதல் வேண்டும்
- நொருக்கு தீனிகளை தவிர்த்தல் வேண்டும்
- உணவில் காய்கறிகள் மற்றும் பழவகைகள் சேர்த்துகொள்ளல் வேண்டும்
- நாள் ஒன்றுக்கு 2 முதல் 3 லிட்டர் தண்ணிர் அருந்துதல் வேண்டும் (குறைந்தது 10 டம்ளர் தண்ணீர்)

முடிவுரை:

இந்நாளில் உயர் இரத்த அழுத்த நோயானது மிகப்பெரிய ஆபத்தை விளைவிக்க கூடிய நோயாக உள்ளது. இதனை முன்பே கண்டறிந்து இந்நோயால் ஏற்படும் பின்விளைவுகளை தவிர்த்து வளமான வாழ்வை பெறலாம்



'உயர் இரத்த அழுத்த நோயை முன்பே கண்டறிவீர்
பக்கவாத நோயை தவிர்ப்பீர்'

‘உயர் இரத்த அழுத்தம்’
வருமுன் காப்போம்!
வந்துவிட்டால், முறையான
மருத்துவம் கொள்வோம்!!
‘பக்கவாதம்’ வராமல் தடுப்போம்!!

வாழ்க வளமுடன்

APPENDIX-V

PERMISSION LETTER FOR CONDUCTION OF STUDY

From

Mrs.H.Jayalakshmi,
M.Sc(N) II year Student,
RASS Academy College of Nursing,
Poovanthi, Sivagangai District.

To

The Managing Director,
Nandhini Nursing home,
Jaihindupuram,
Madurai - 11

Respected Sir,

Sub: Permission to collect data among the Hypertensive Patients-Reg

I am Mrs.H.Jayalakshmi, doing M.Sc(Nursing) in RASS Academy College of Nursing, Poovanthi, Sivagangai District, affiliated to the Tamilnadu Dr.MGR.Medical University, Chennai. As part of my curriculum, I am conducting a research study on the topic:

"A study to assess the effectiveness of Self-instructional module on knowledge regarding Prevention of stroke among hypertensive patients in selected hospitals in Madurai District"

The purpose of this study is to educate the hypertensives and insist them to follow the life style modifications in order to prevent complications like stroke. I request you to grant permission to undergo data collection in your esteemed hospital.

Thanking you

Yours Faithfully,

H.Ji

[H. JAYALAKSHMI]

rwanded

PRINCIPAL
RASS ACADEMY COLLEGE
OF NURSING
POOVANTHI - 630 311

Dr. SUJATHA SANGUMANI, M.B.,B.S.,DGO
Obstetrician & Gynogologist
Regd. MedicaNPractitioner
Reg. No. 50916

APPENTDIX VI

COPIES OF CERTIFICATION OF CONTENT VALIDITY

This is to certify that have perused the research proposal submitted by Miss.H.Jayalakshmi that "effectiveness of self instructional module on prevention of stroke among hypertensive patients in selacted hospitals, at Mdurai District" I found that methodology and instruments are appropriate.

SIGNATURE

APPENDIX VI

COPIES OF CERTIFICATION OF CONTENT VALIDITY

This is to certify that have perused the research proposal submitted by Miss.Mesiya Femina, that "Effectiveness of video assisted teaching programme on knowledge regarding prevention of pressure sore among care givers of immobilized patients in selected hospitals, at Madurai District". I found that methodology and instruments are appropriate.

SIGNATURE

APPENDIX -VII

LIST OF EXPERTS CONSULTED FOR CONTENT VALIDIT

1. Dr.Prof.Mrs.S.RAJINA RANI, M.Sc (N),Ph.D,

Principal,

RASS Academy College of Nursing,

Poovanthi, Sivagangai Dist-630611.

3. Prof.Mrs.H.UMMUL HAPIPA, M.Sc (N).,

HOD, Department of Medical Surgical Nursing,

RASS Academy College of Nursing,

Poovanthi, Sivagangai Dist

4.Dr.SANGUMANI, MD.,

The Senior Consultant ,

Nandhini nursing Home ,

Madurai.

5.Dr.Varadharajan, M.Sc.,M.Phil.,M.Ed.,Ph.D(Edn).,

Professor of Statistics

RASS Academy College of Nursing,

Poovanthi, Sivagangai Dist

6.Mrs.M.Visalakshi, M.Sc(N).,

Reader

RASS Academy College of Nursing,

Poovanthi, Sivagangai Dist

7.Mrs.M.Kavitha, M.Sc(N).,

Asso.Professor

RASS Academy College of Nursing,

Poovanthi, Sivagangai Dist

8.Mrs.Kavitha, M.Sc(N).,

HOD of Medical Surgical Nursing

Madurai Apollo College of Nursing,

Eliyarpathi, Madurai.

APPENDIX-VIII

PHOTO GRAPHICAL EVIDENCE OF DATA COLLECTION